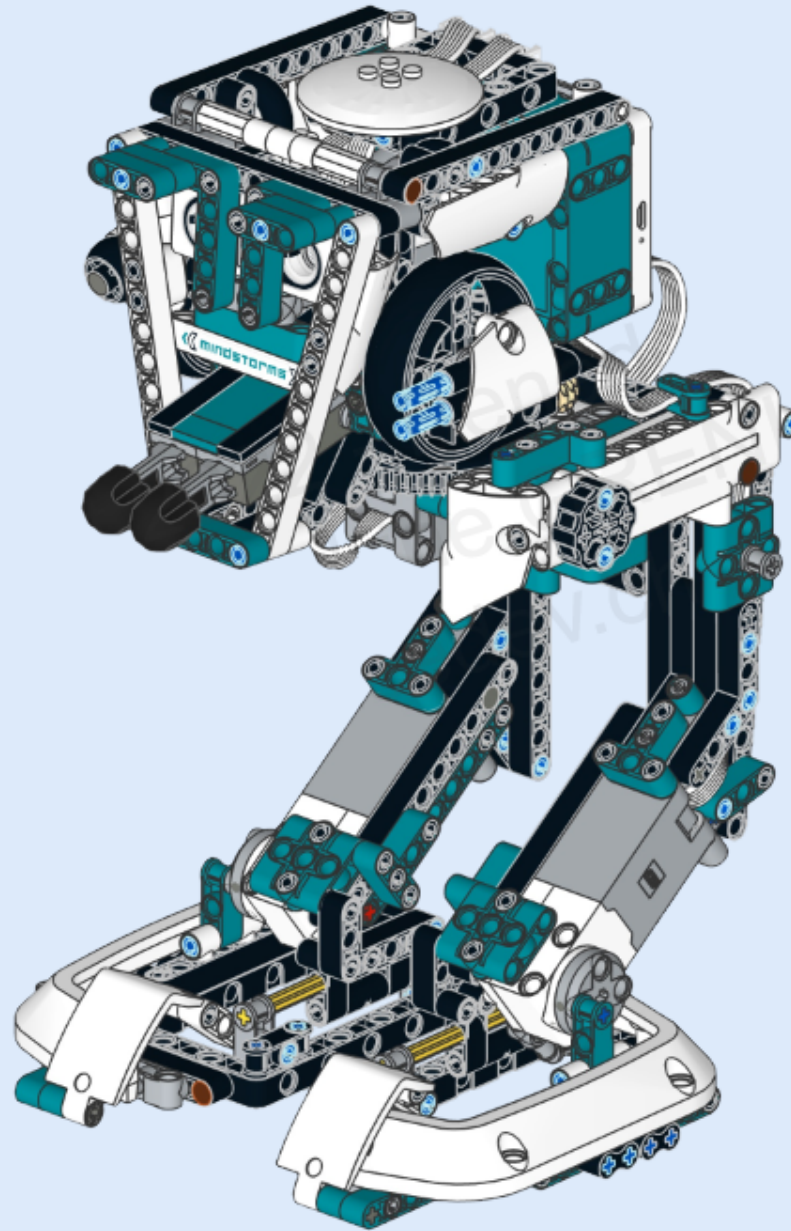




Danny's LAB

All Terrain Scout Transport

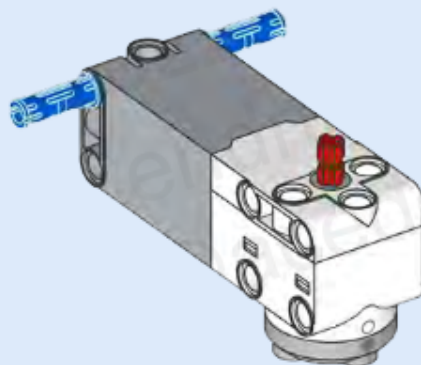
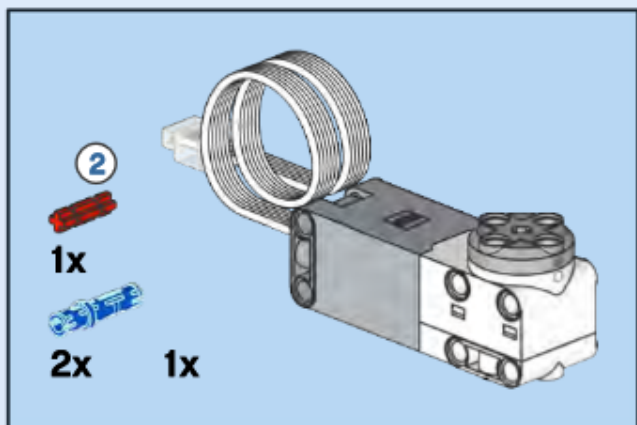
Daniele Benedettelli - 2022



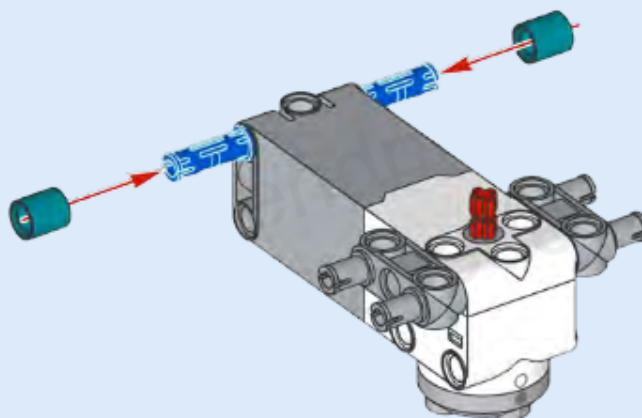
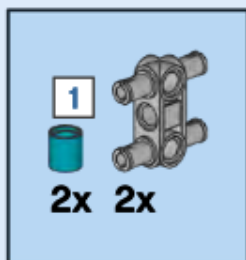
Build it with
LEGO MINDSTORMS Robot Inventor set 51515



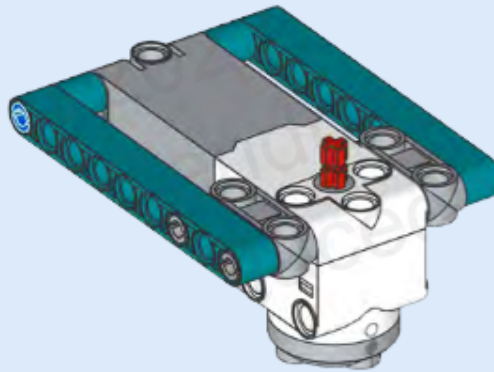
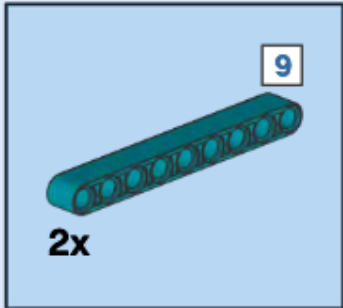
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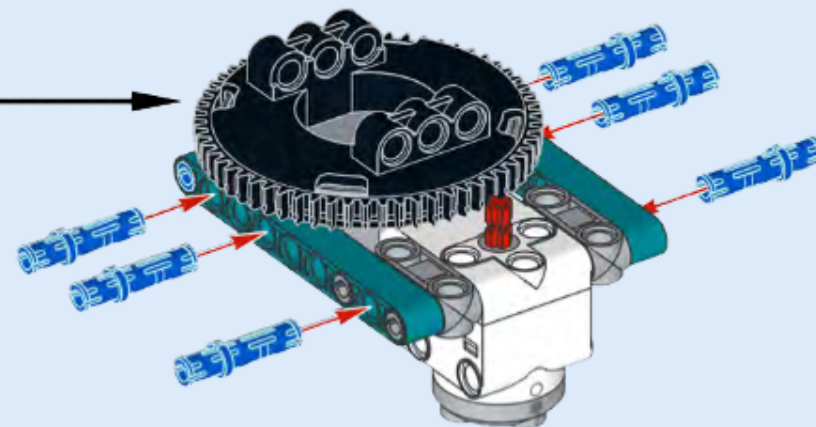
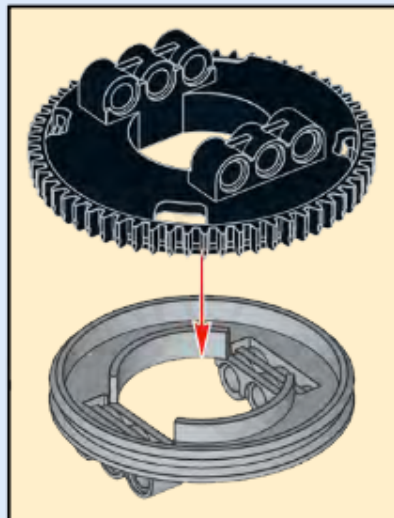
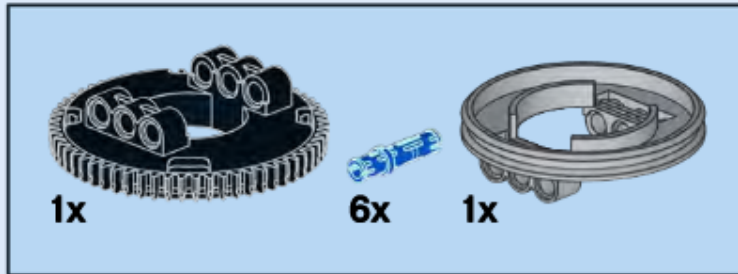
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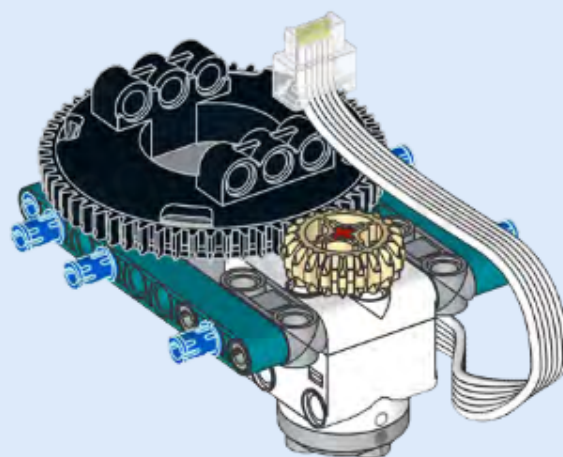
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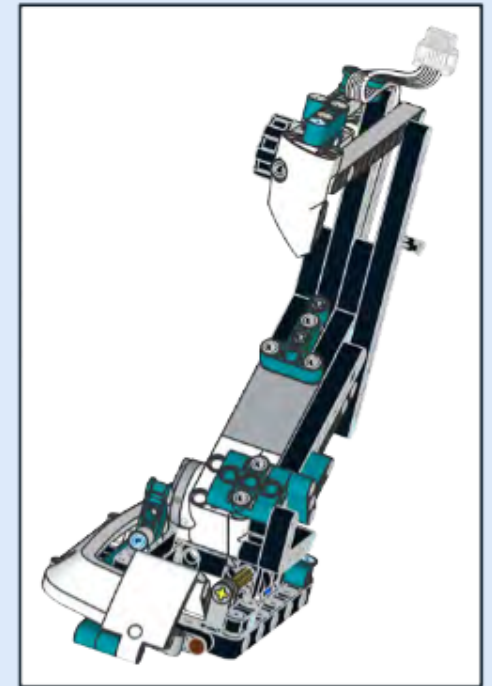
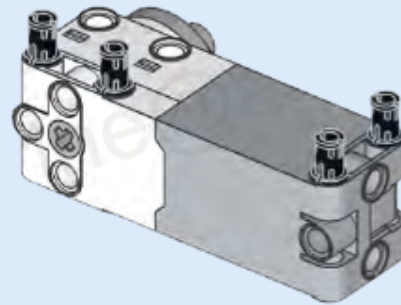
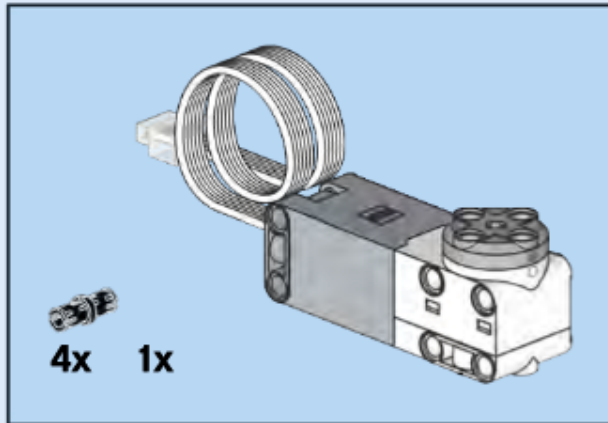
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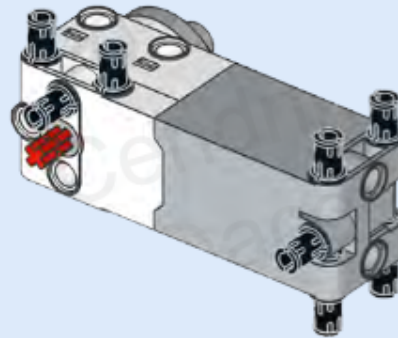
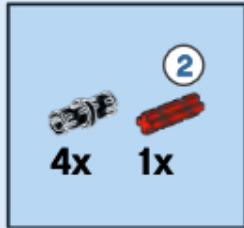
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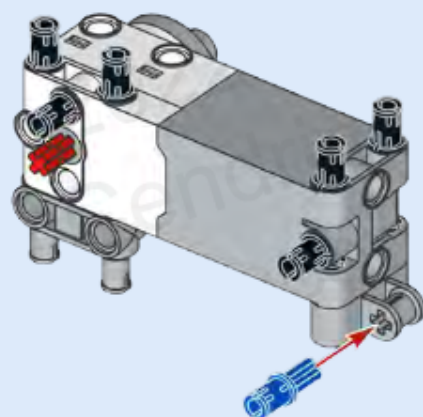
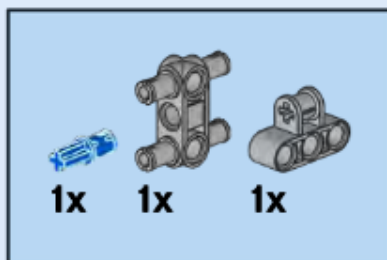
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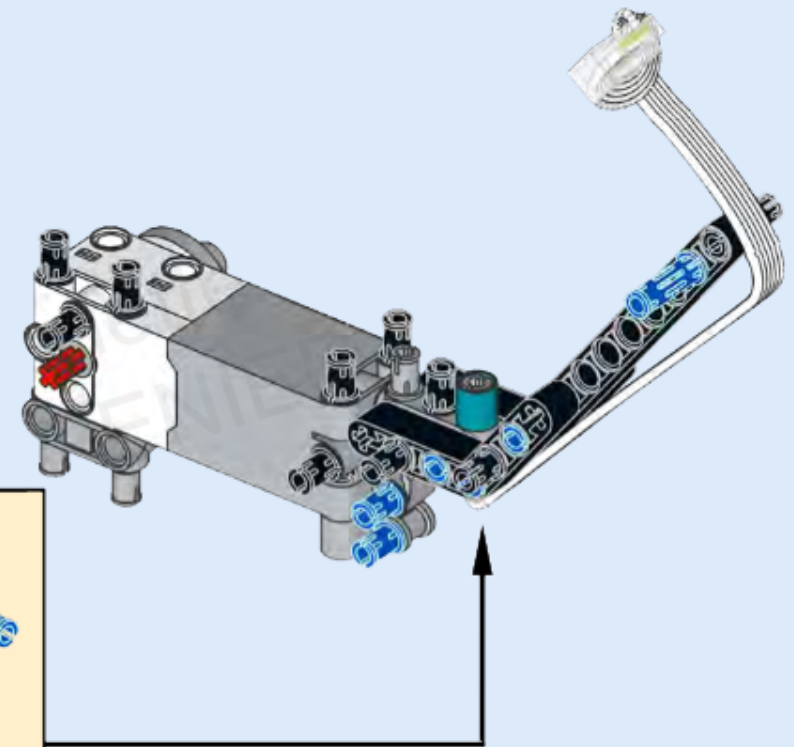
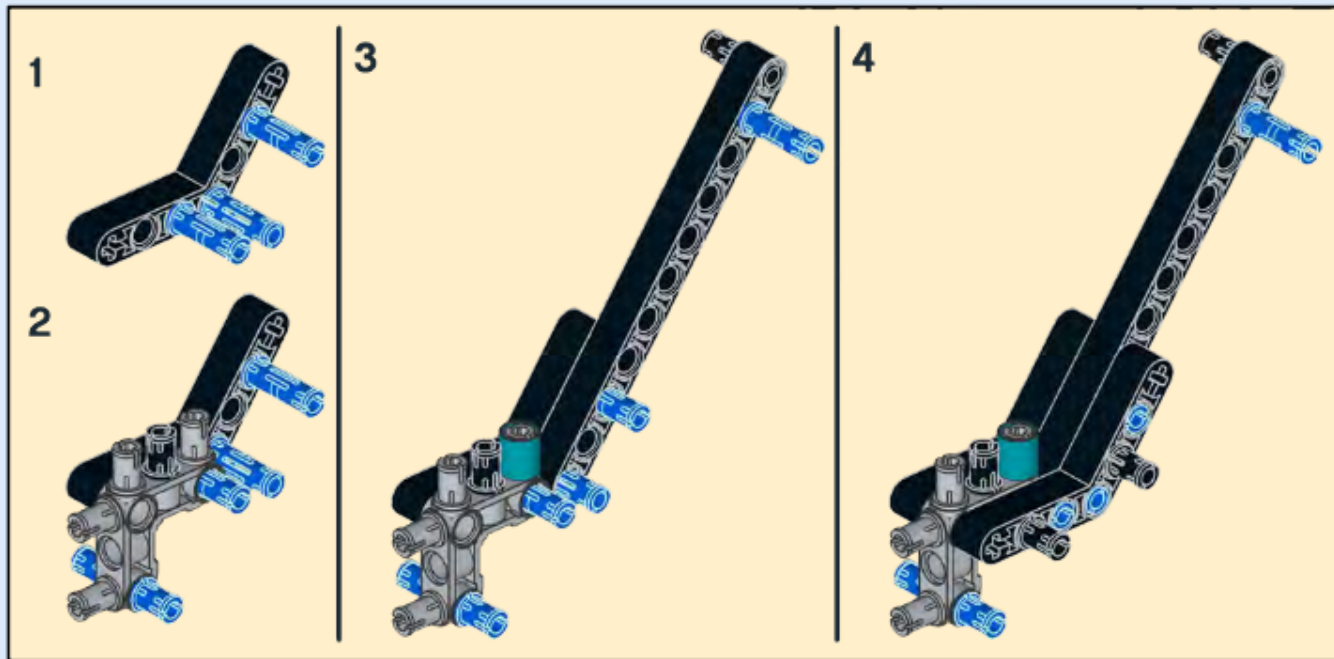
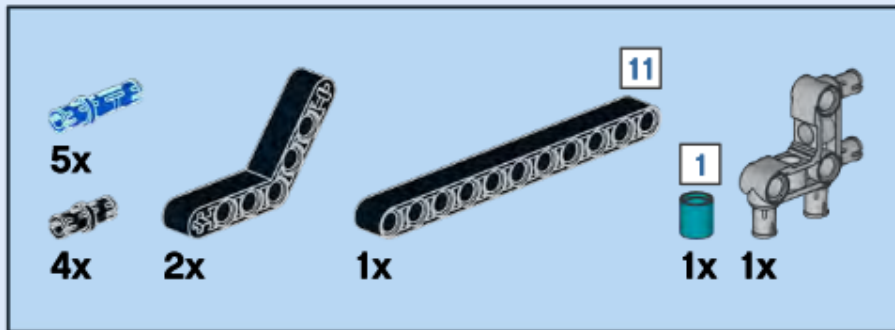
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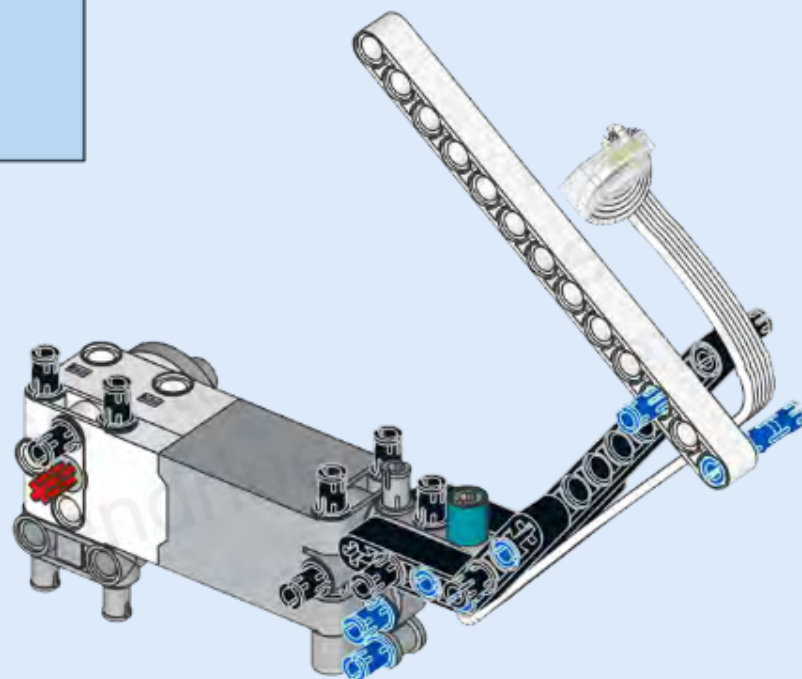
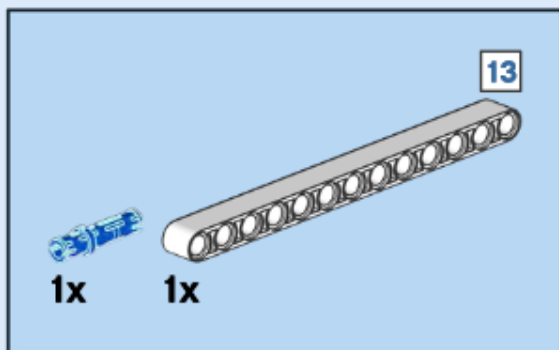
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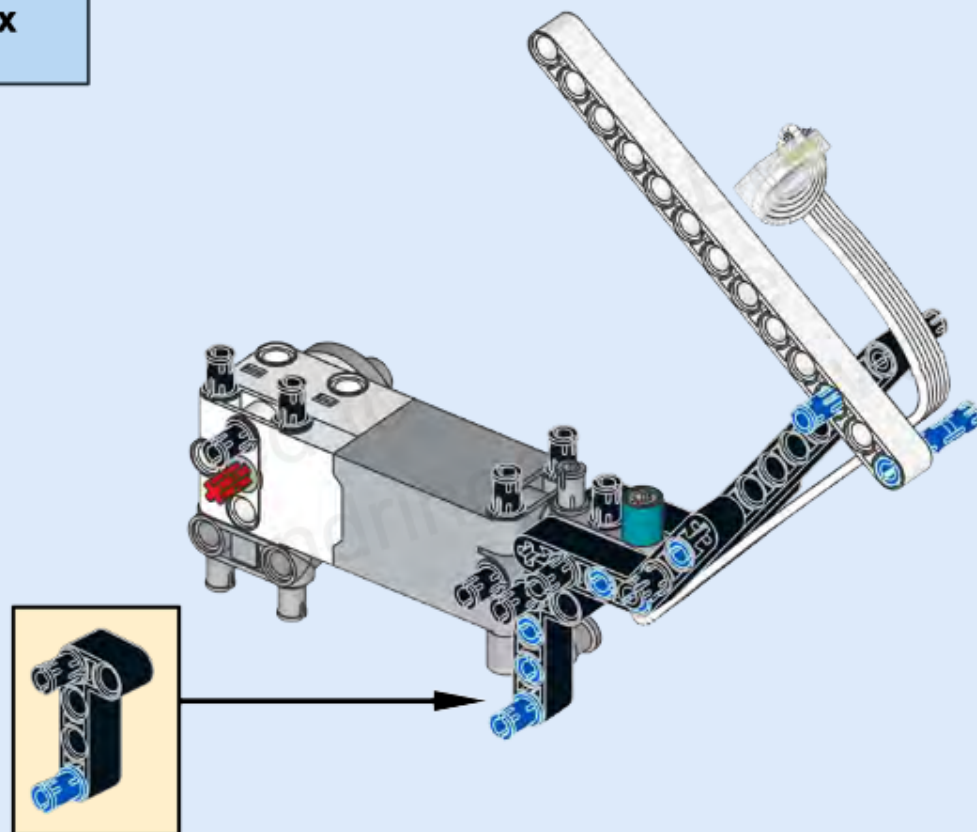
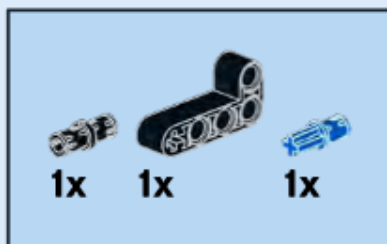
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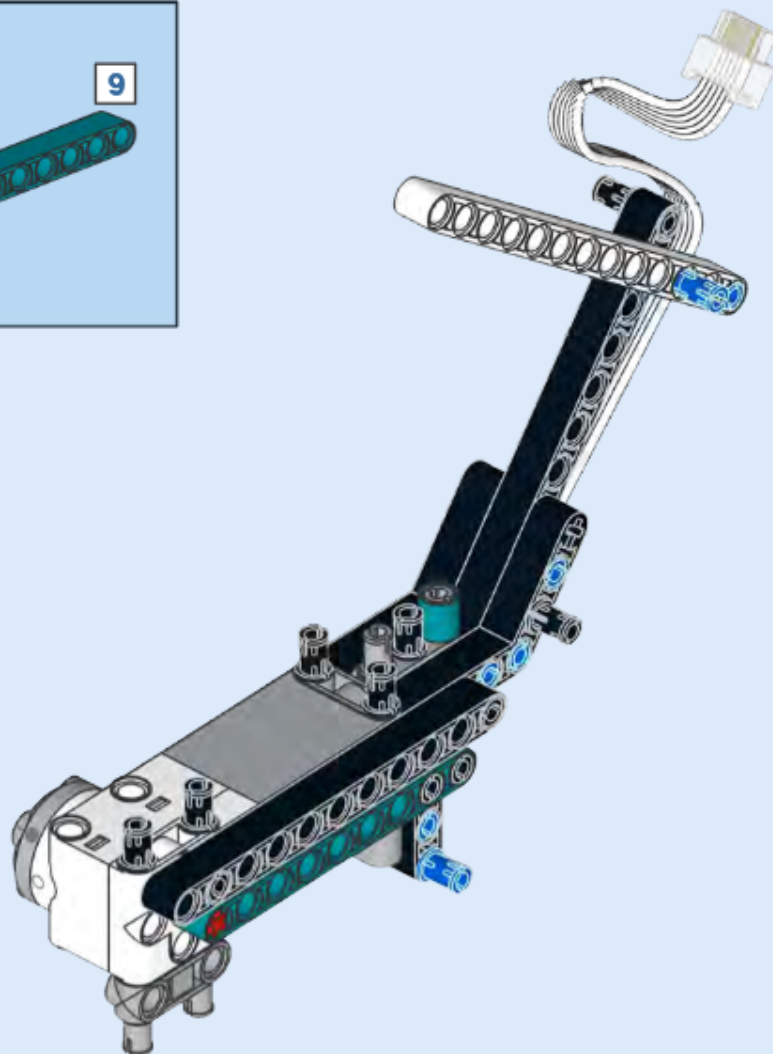
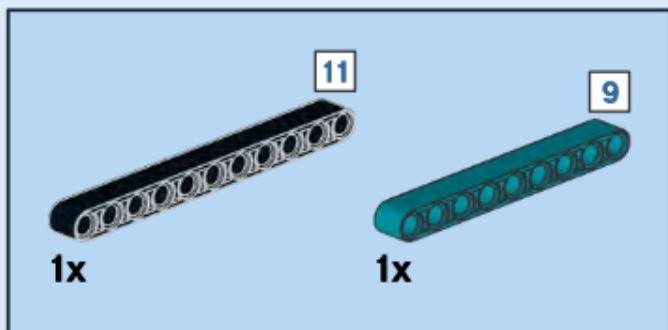
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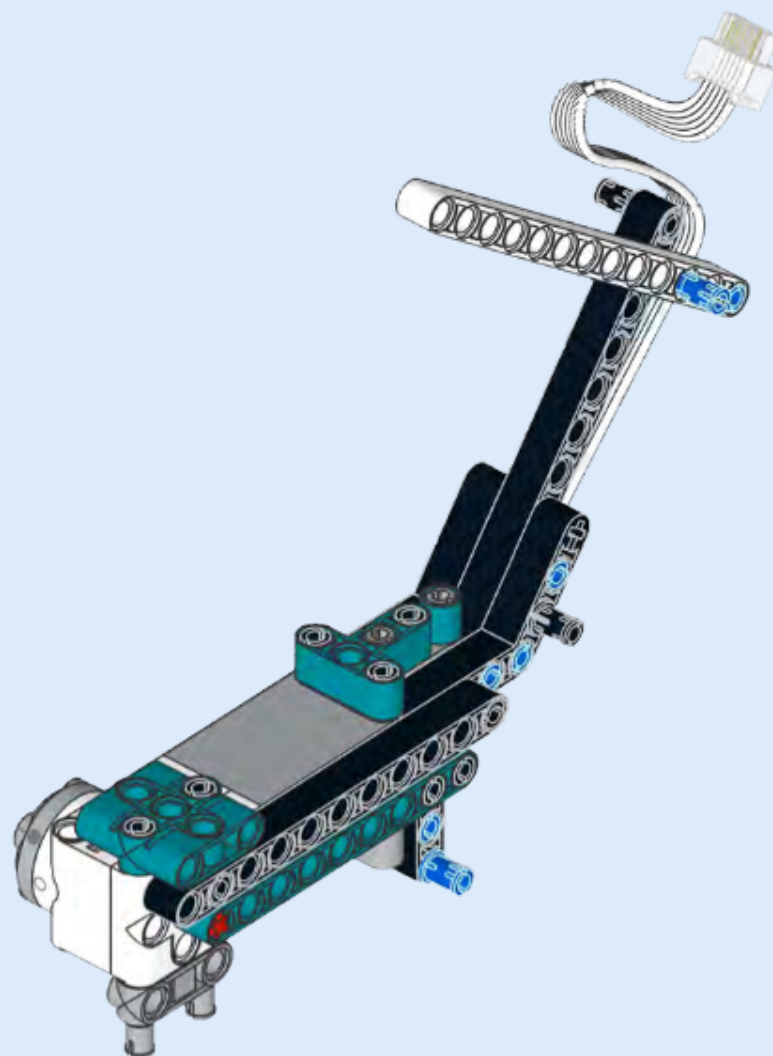
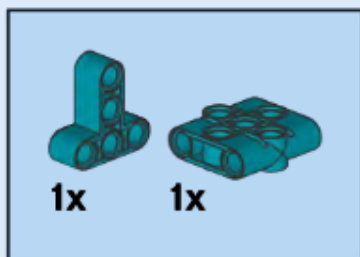
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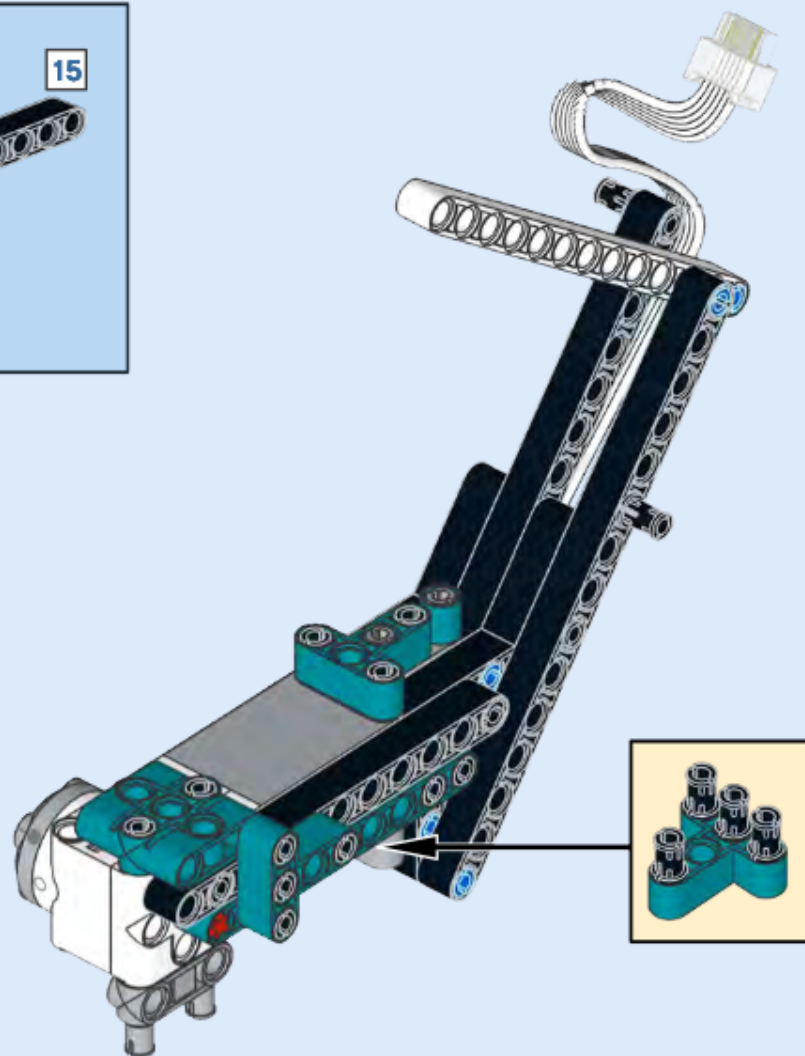
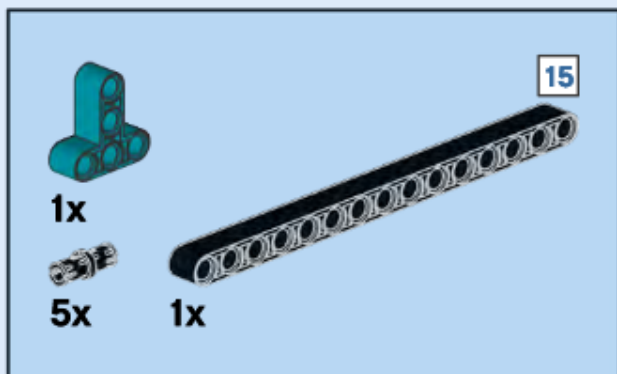
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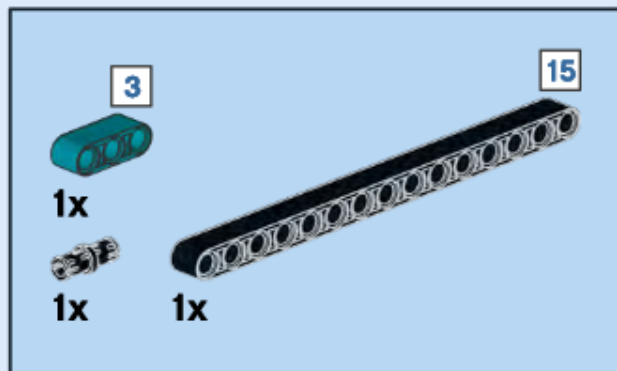
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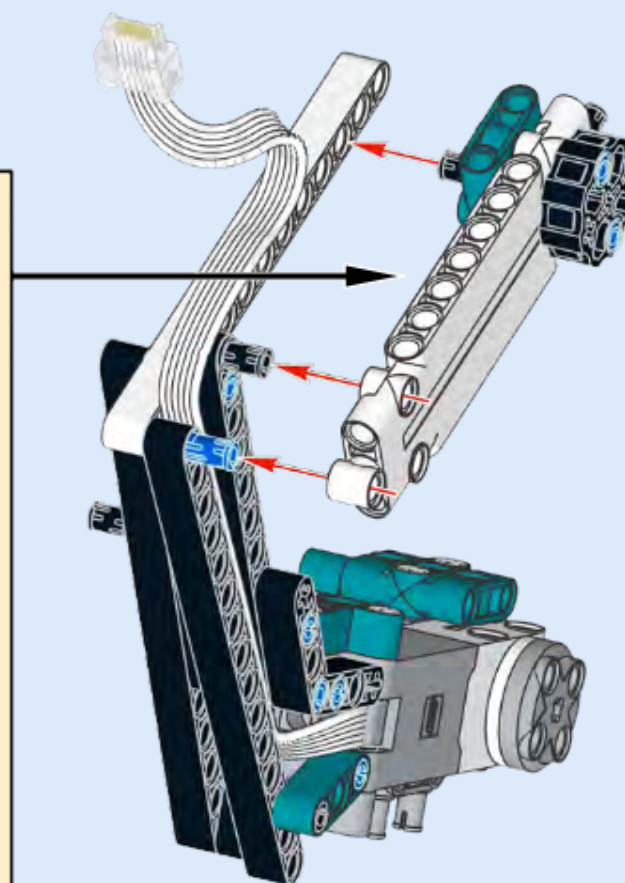
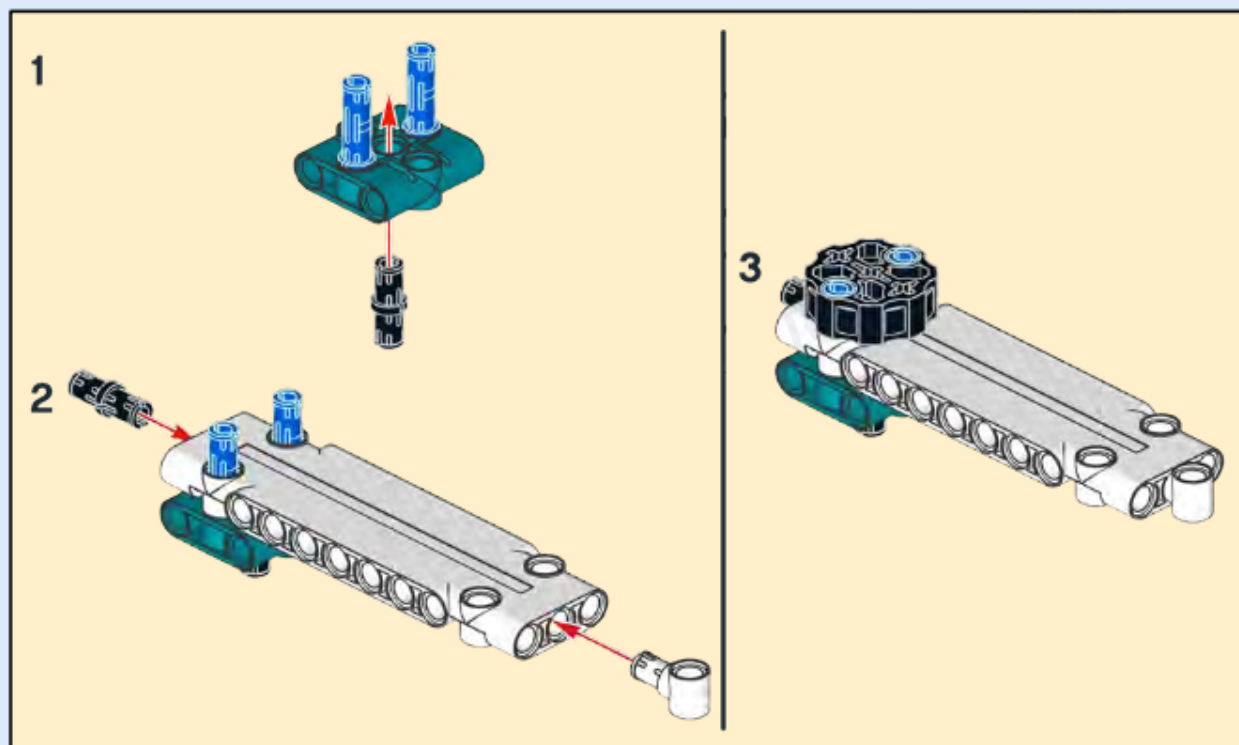
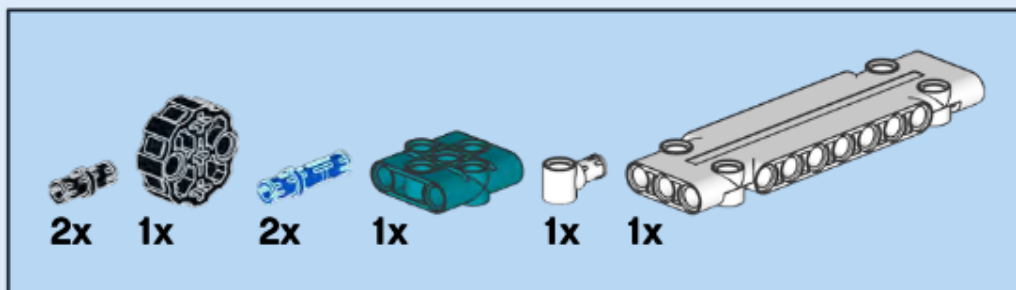
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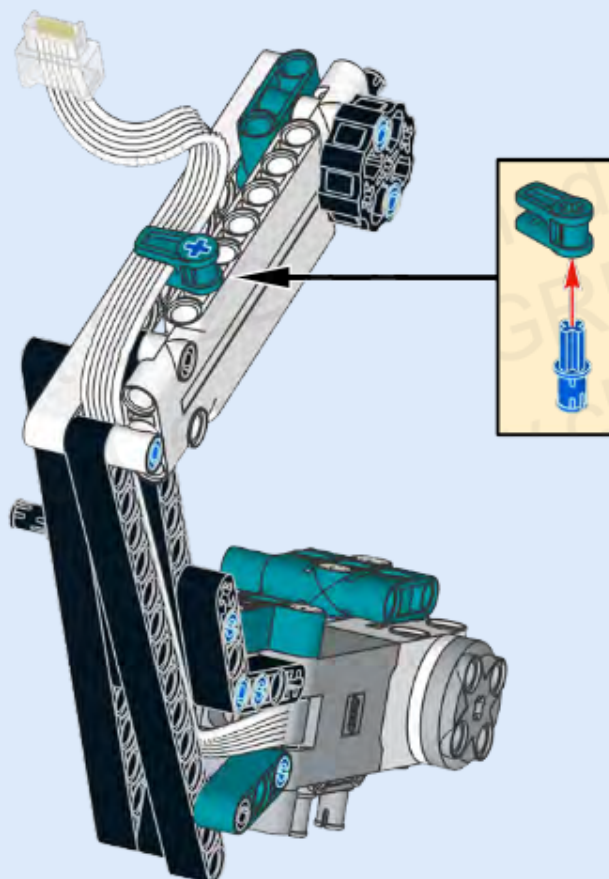
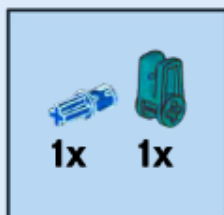
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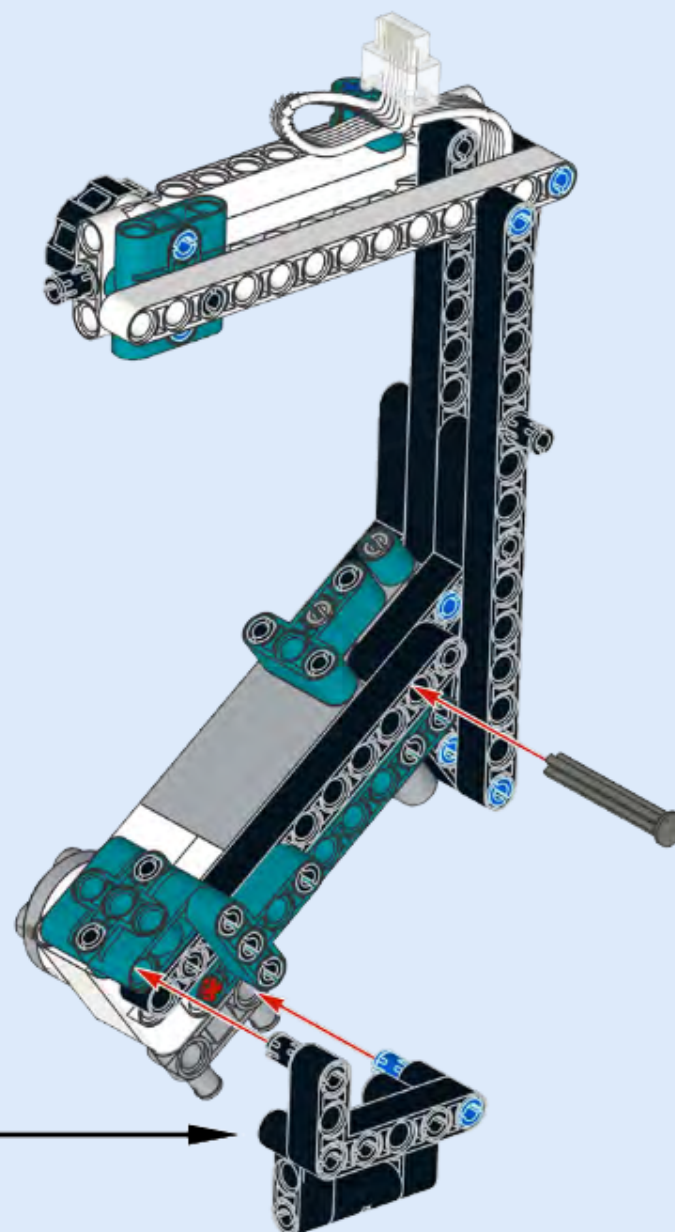
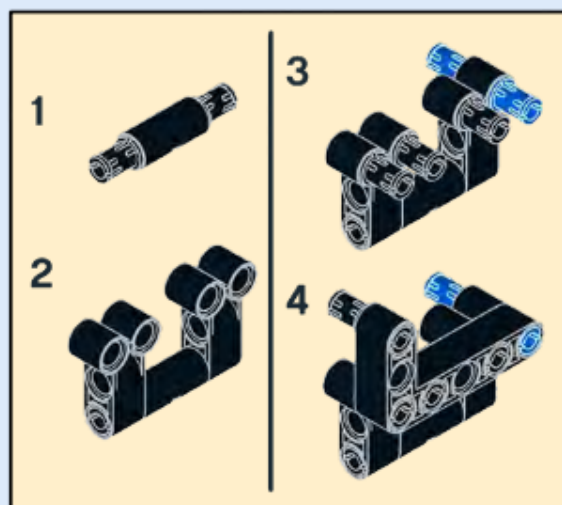
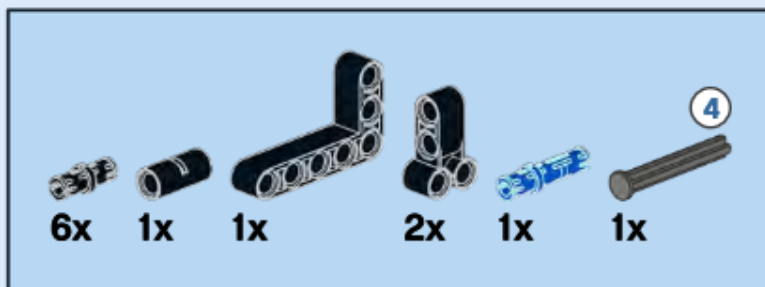
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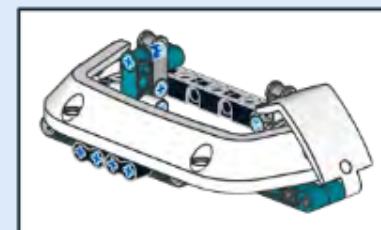
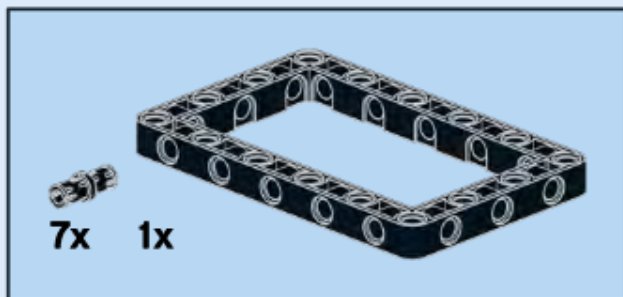
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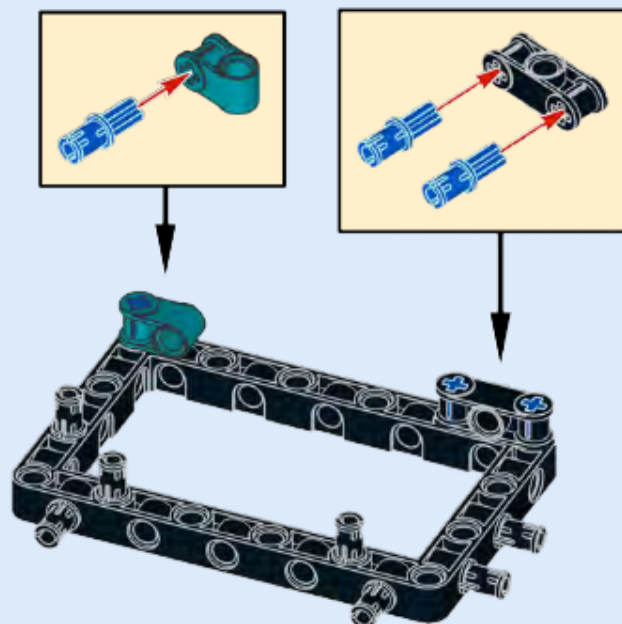
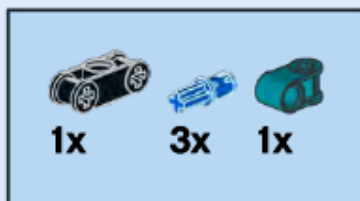
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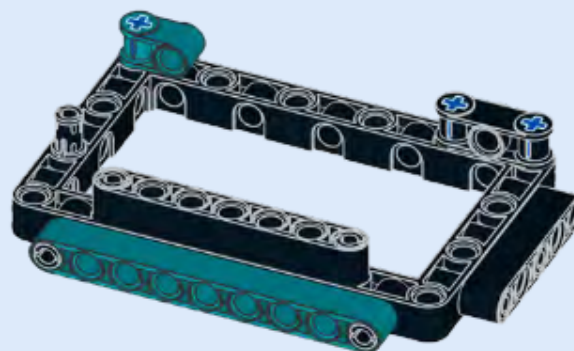
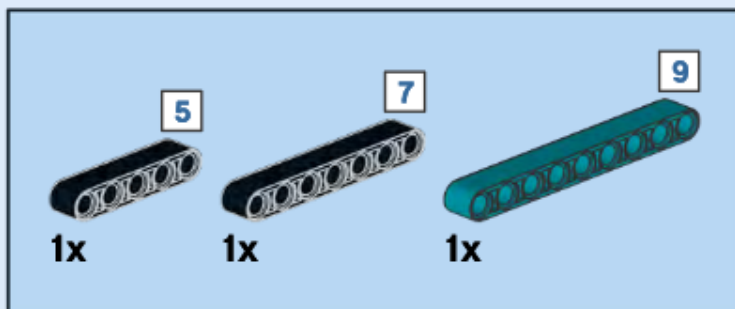
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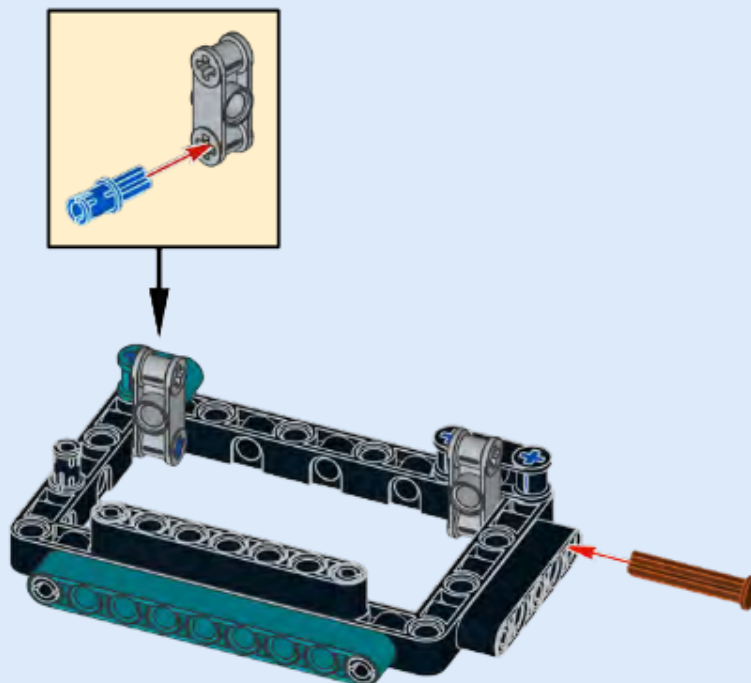
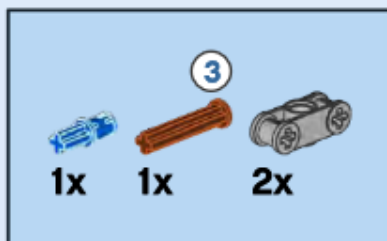
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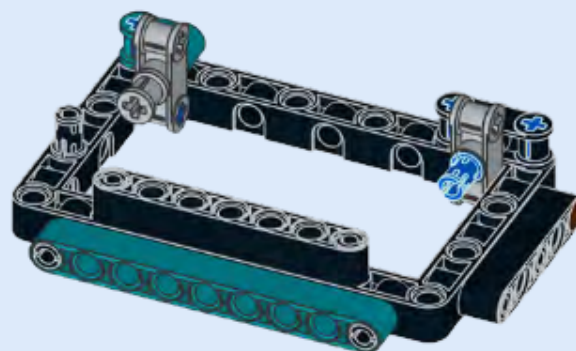
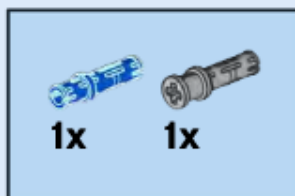
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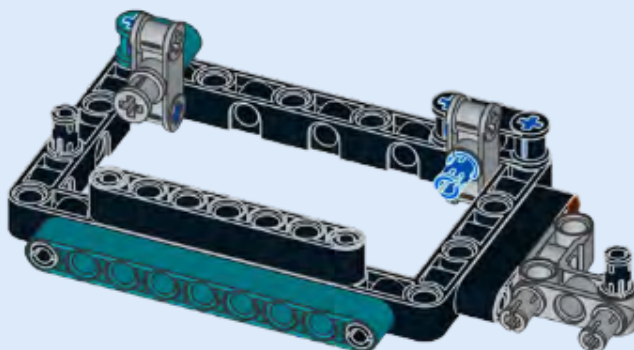
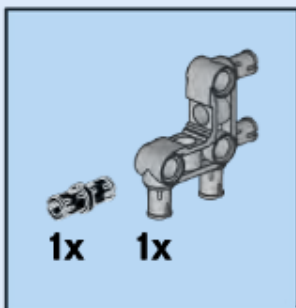
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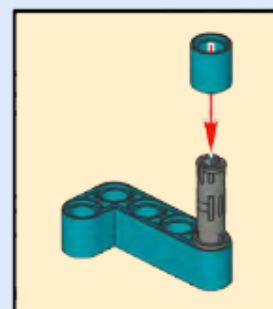
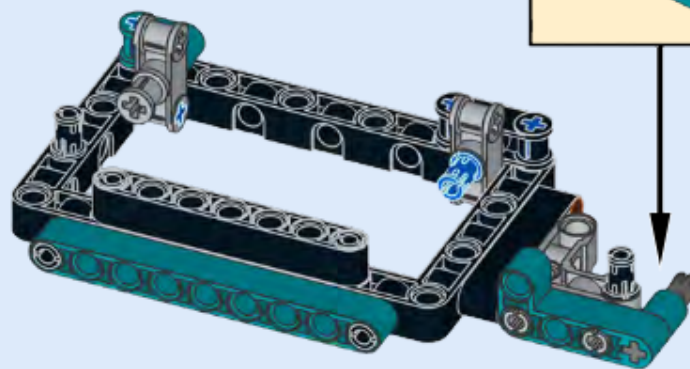
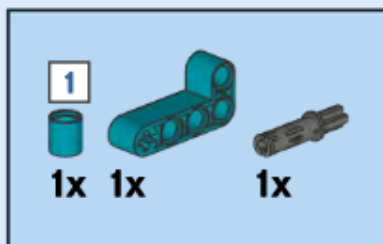
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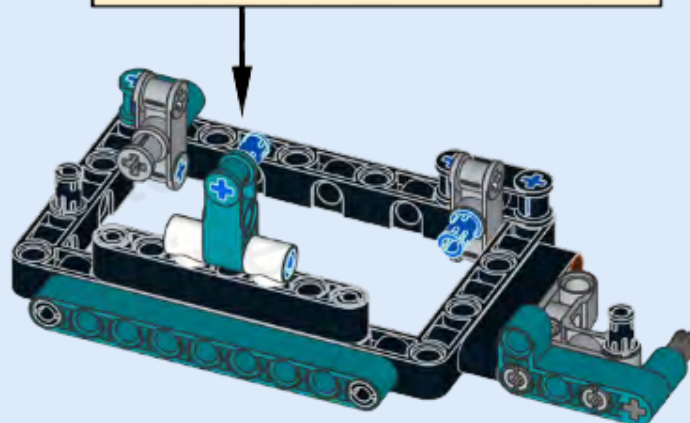
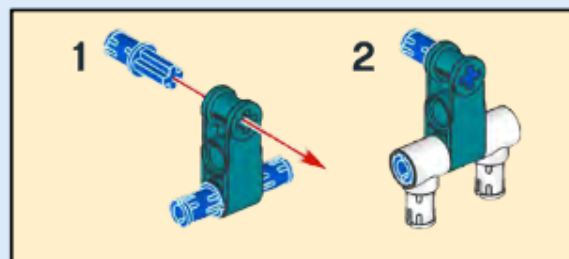
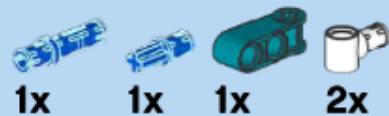
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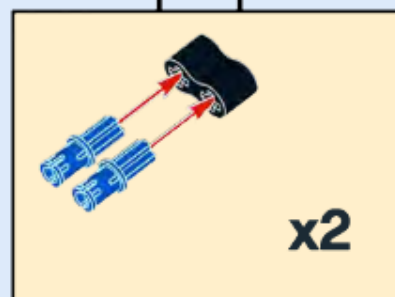
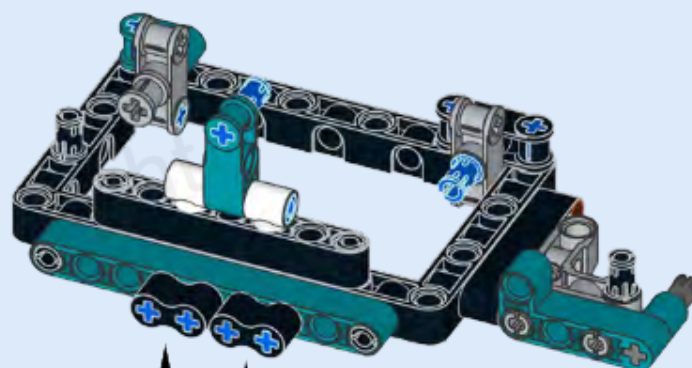
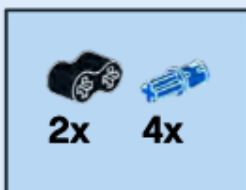
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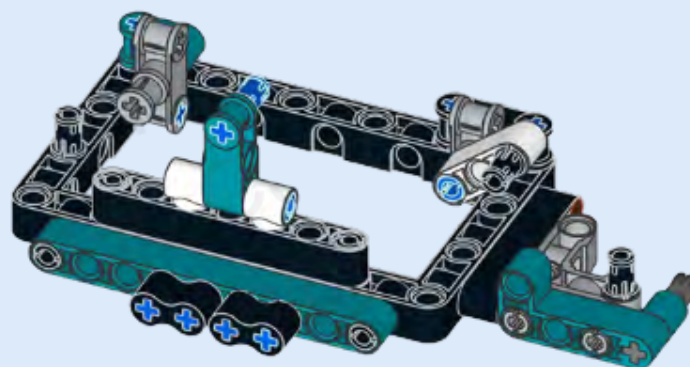
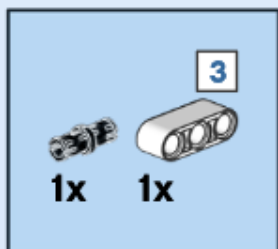
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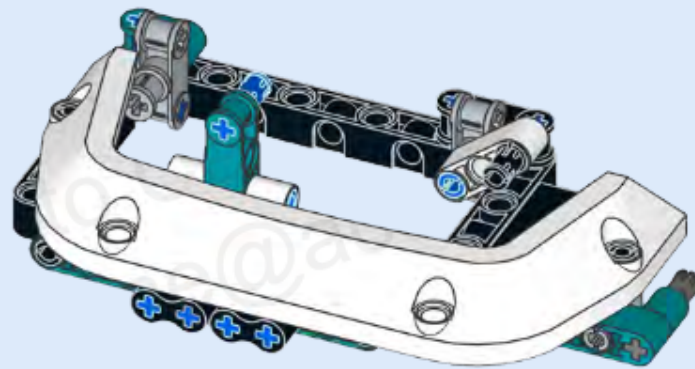
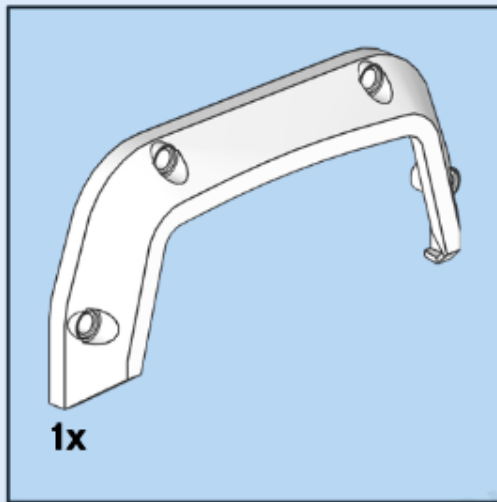
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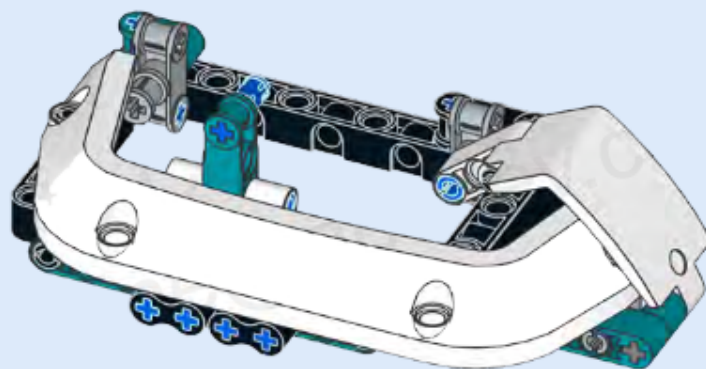
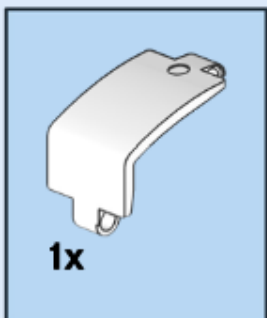
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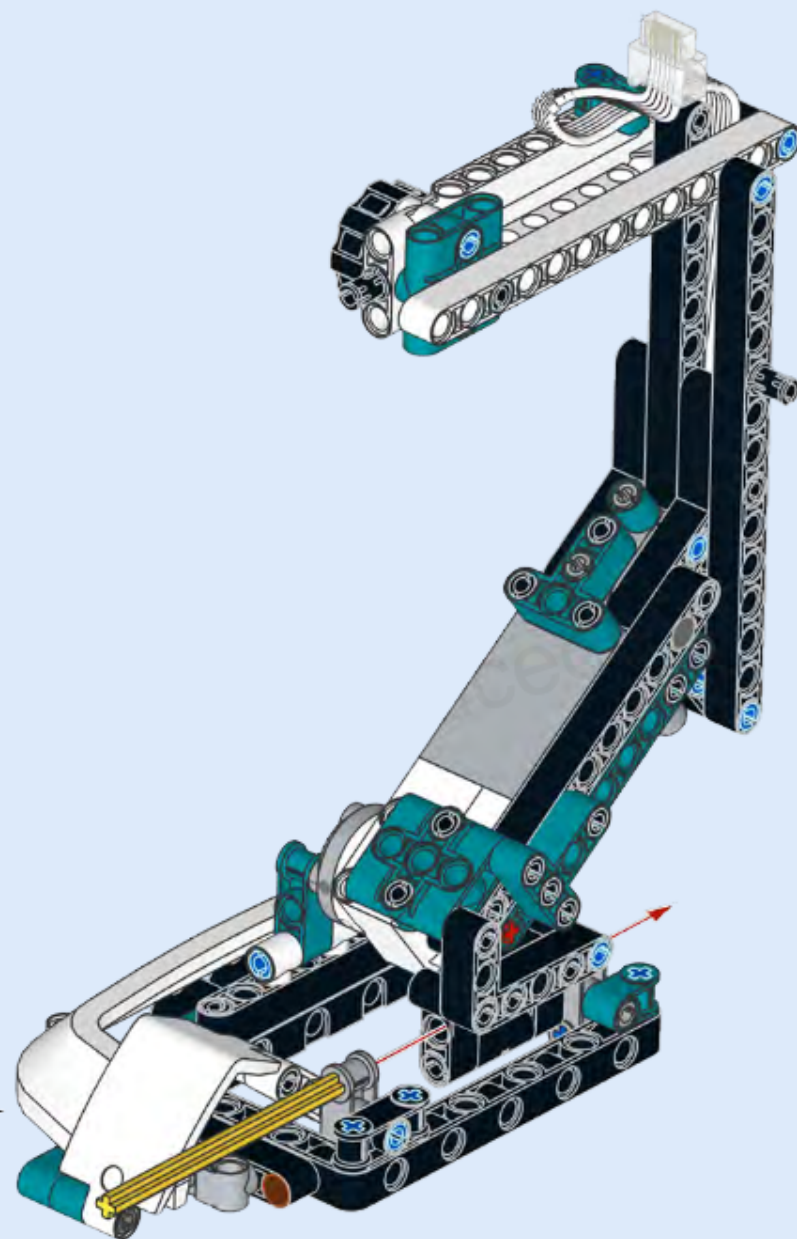
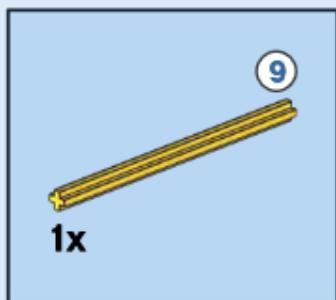
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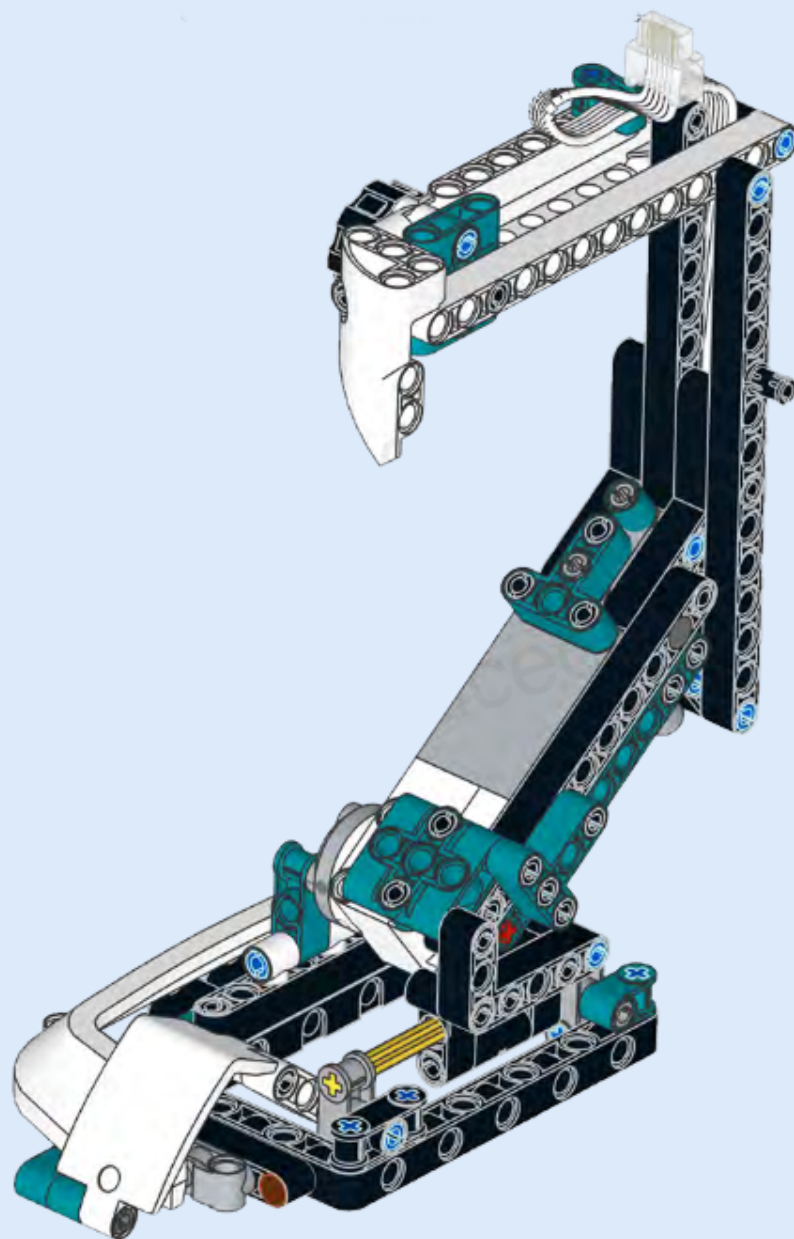
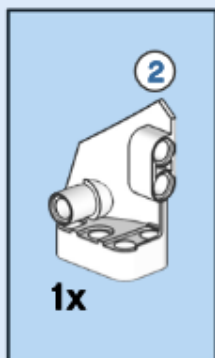
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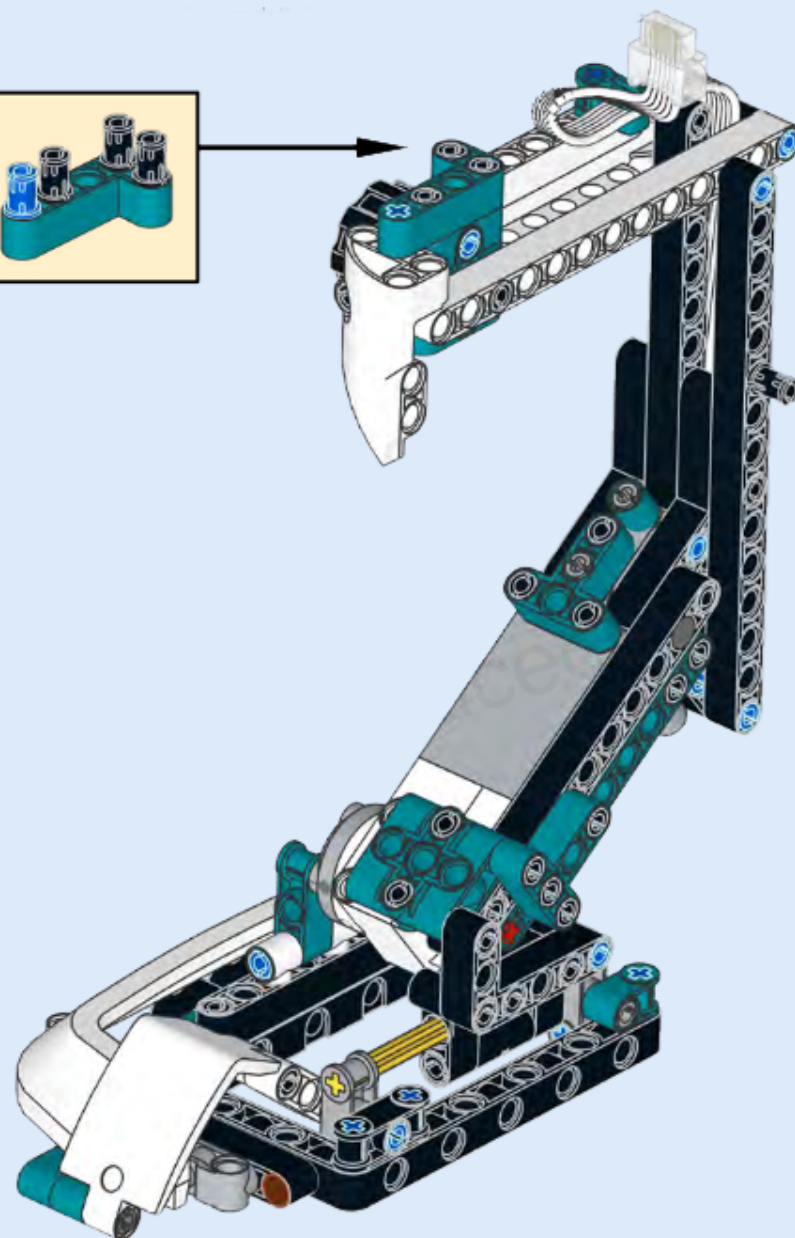
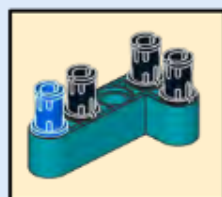
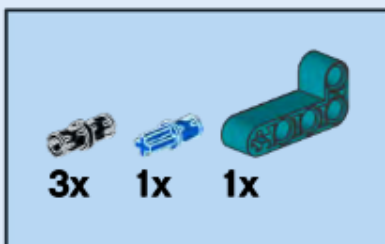
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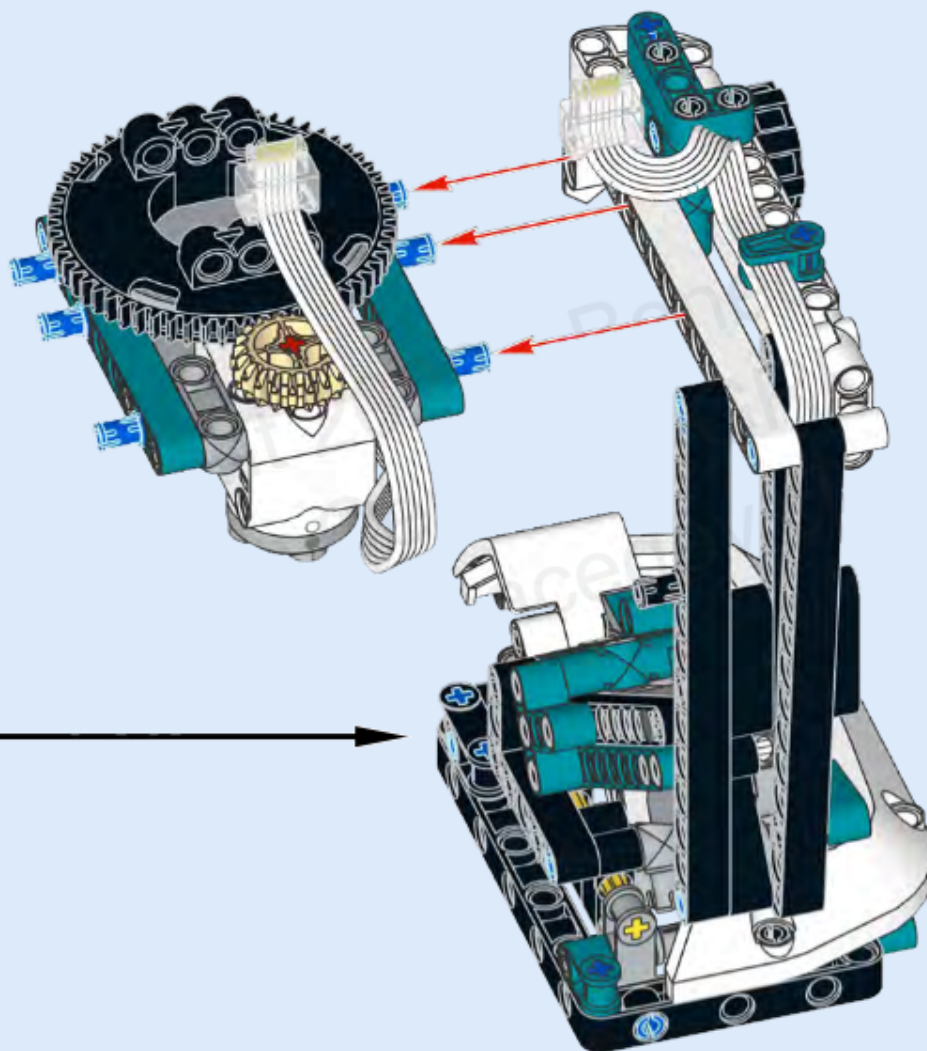
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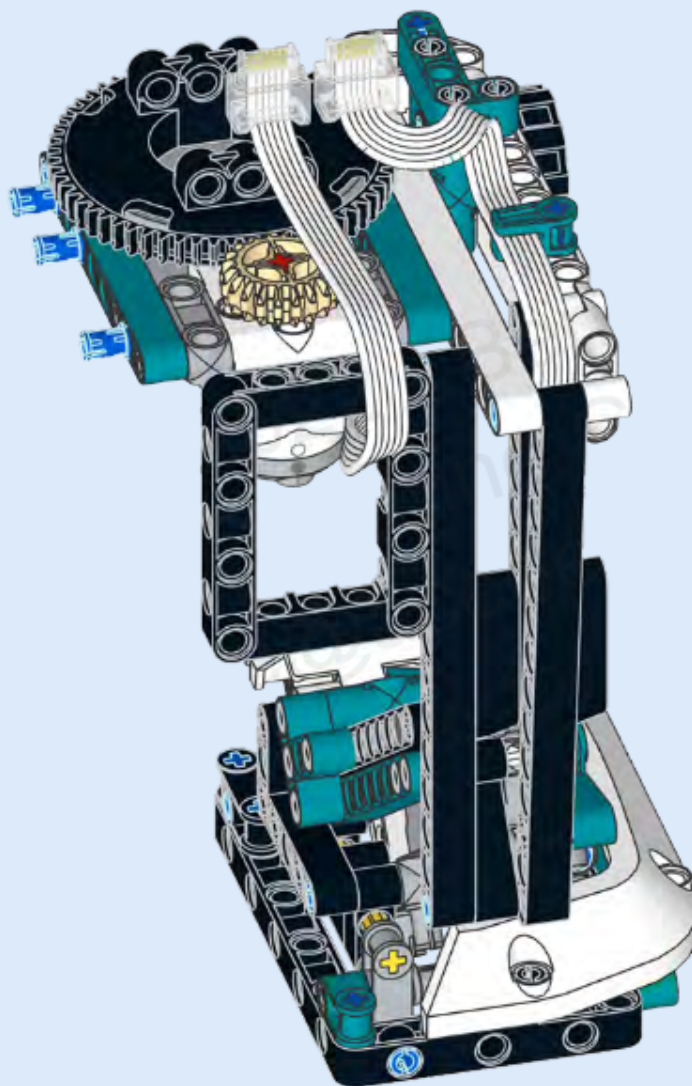
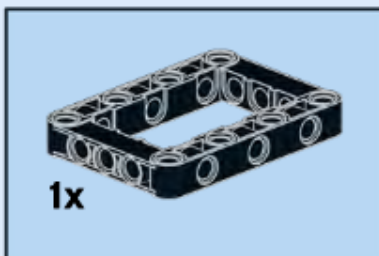
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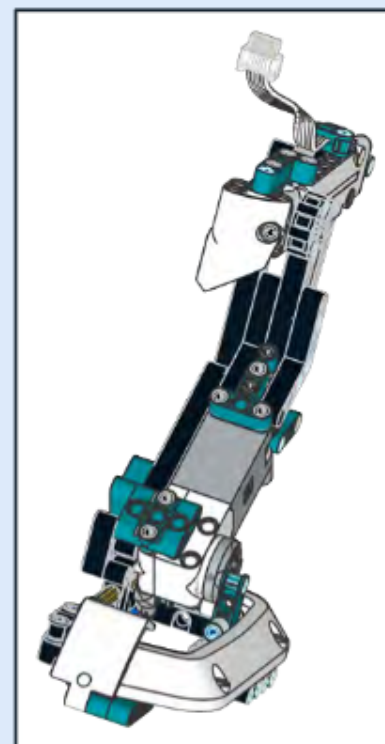
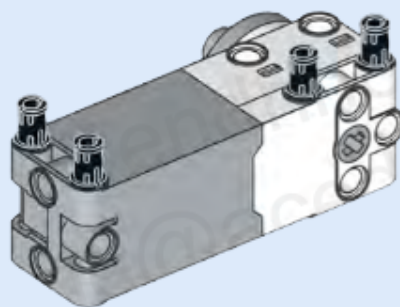
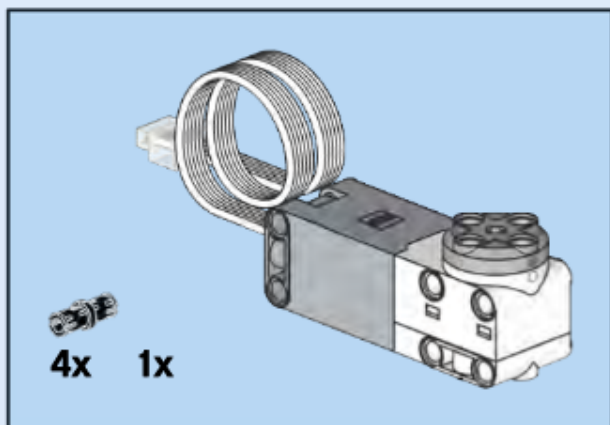
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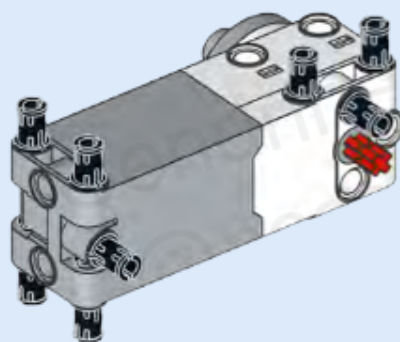
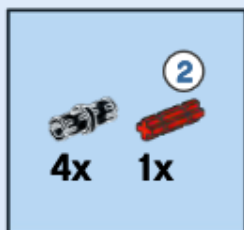
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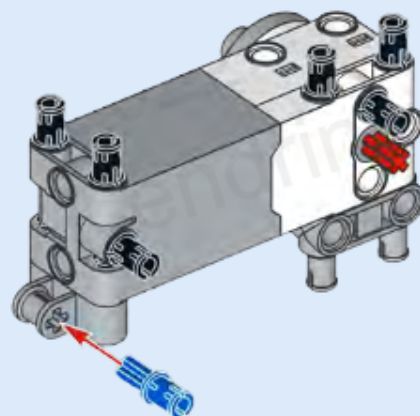
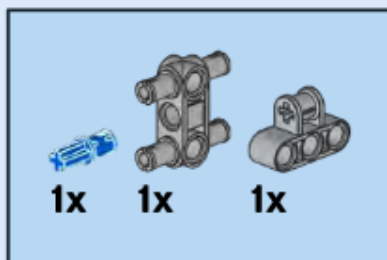
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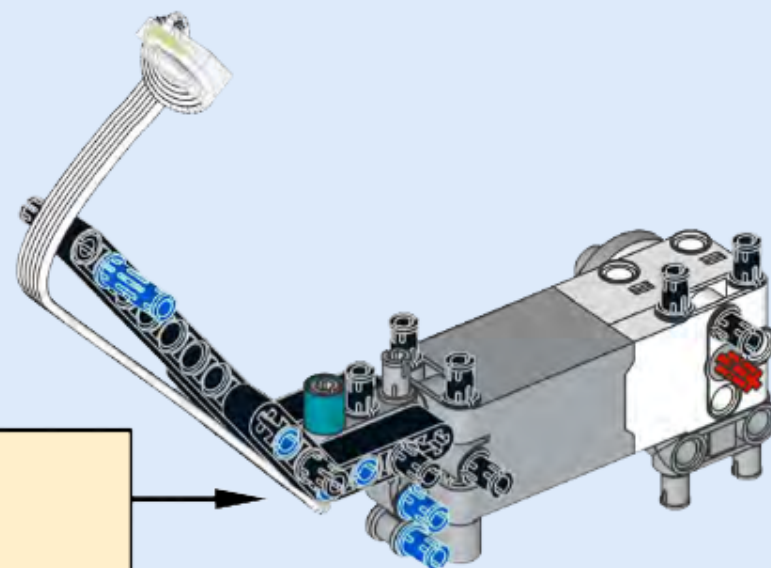
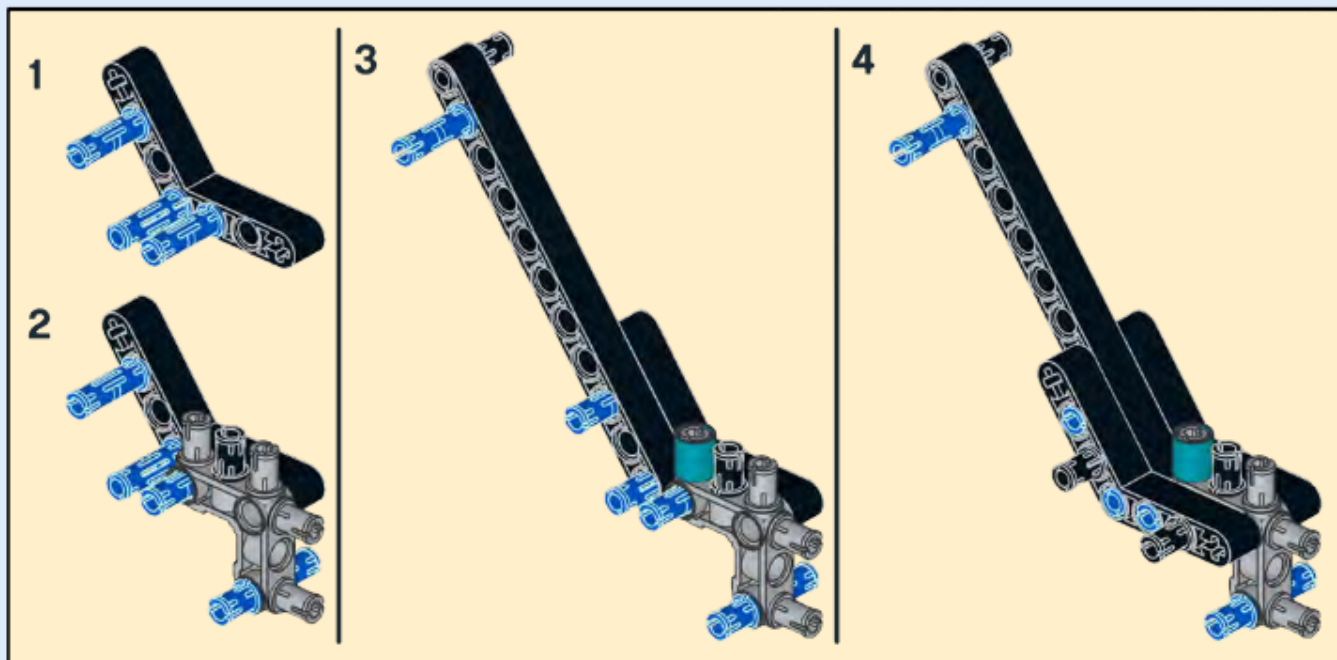
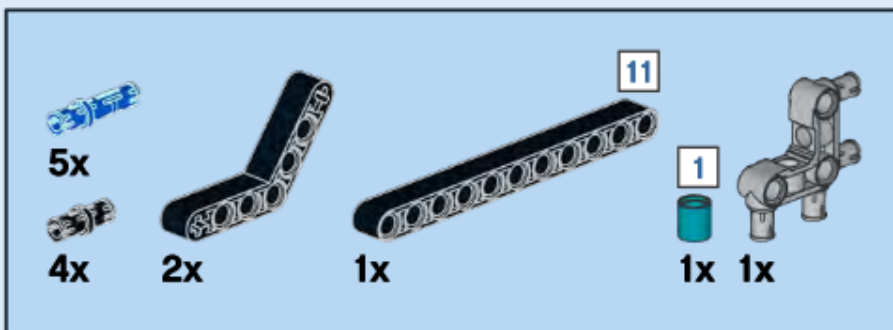
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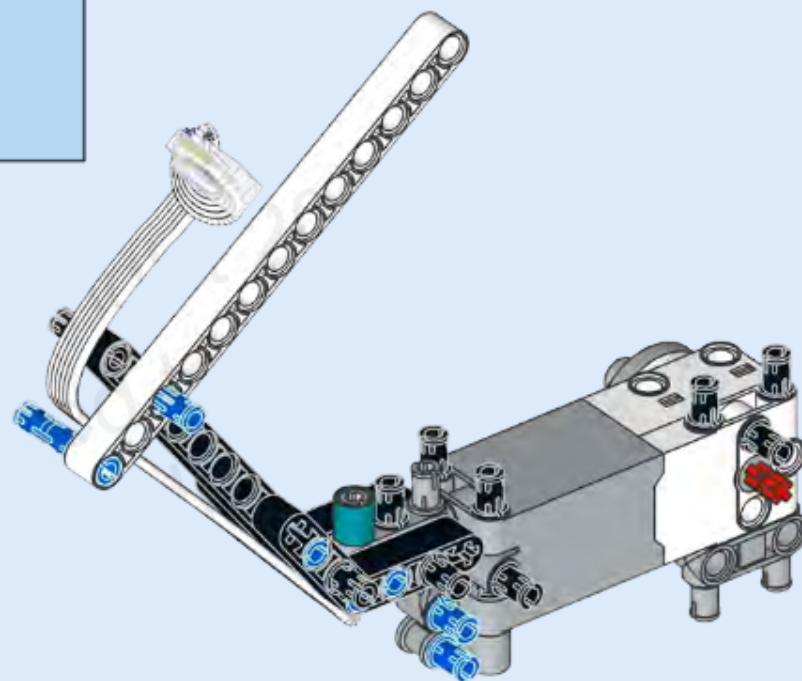
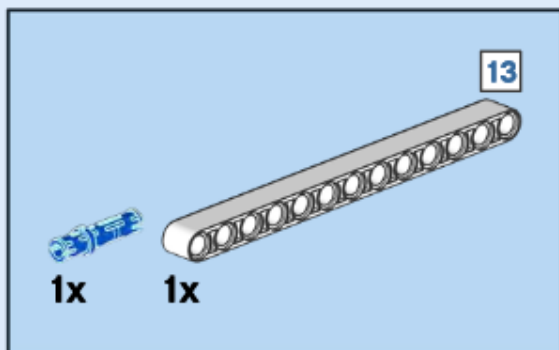
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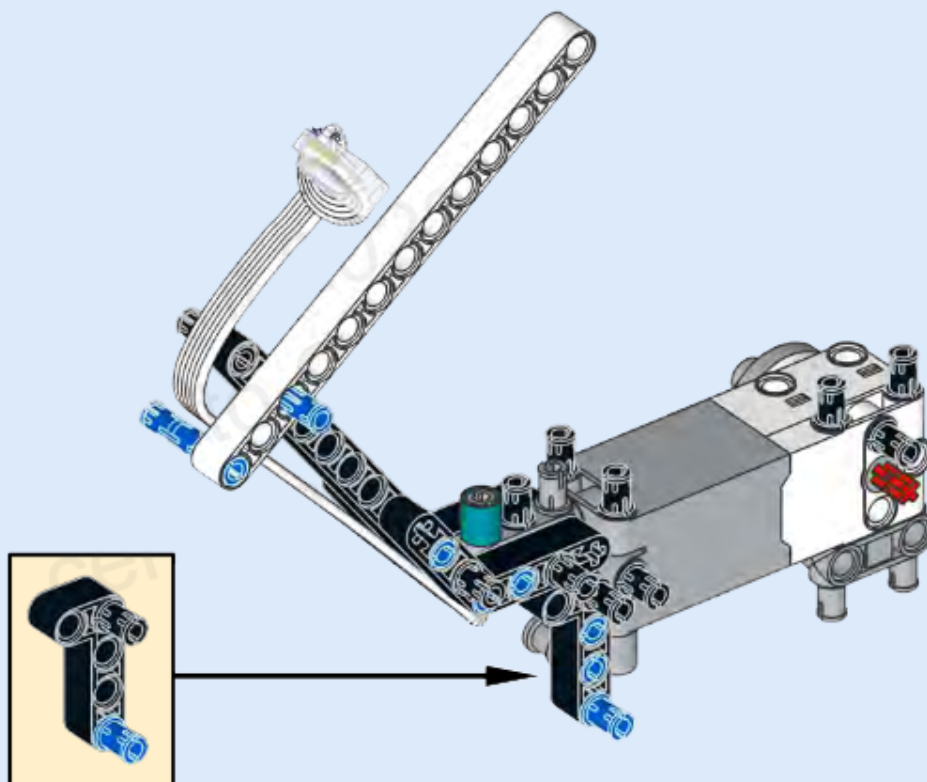
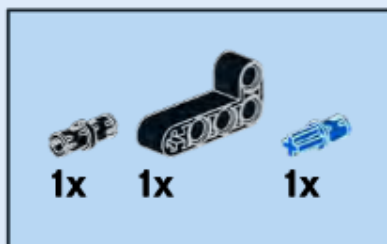
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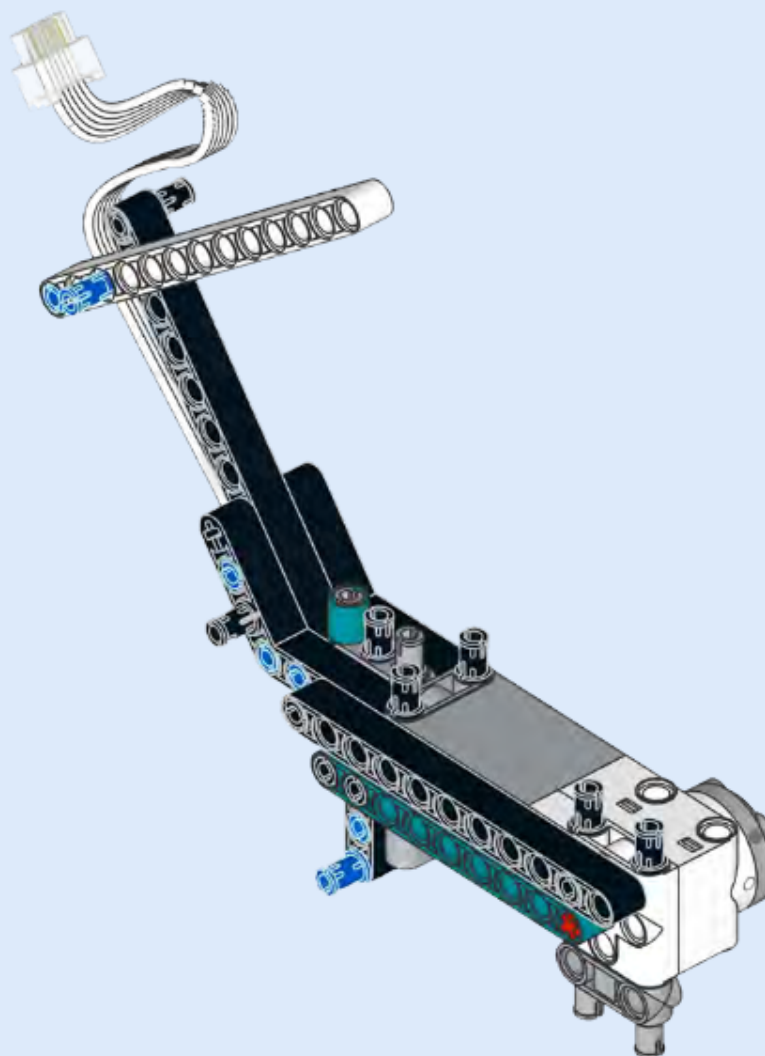
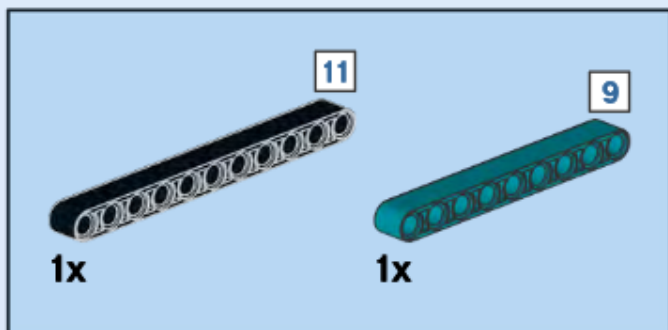
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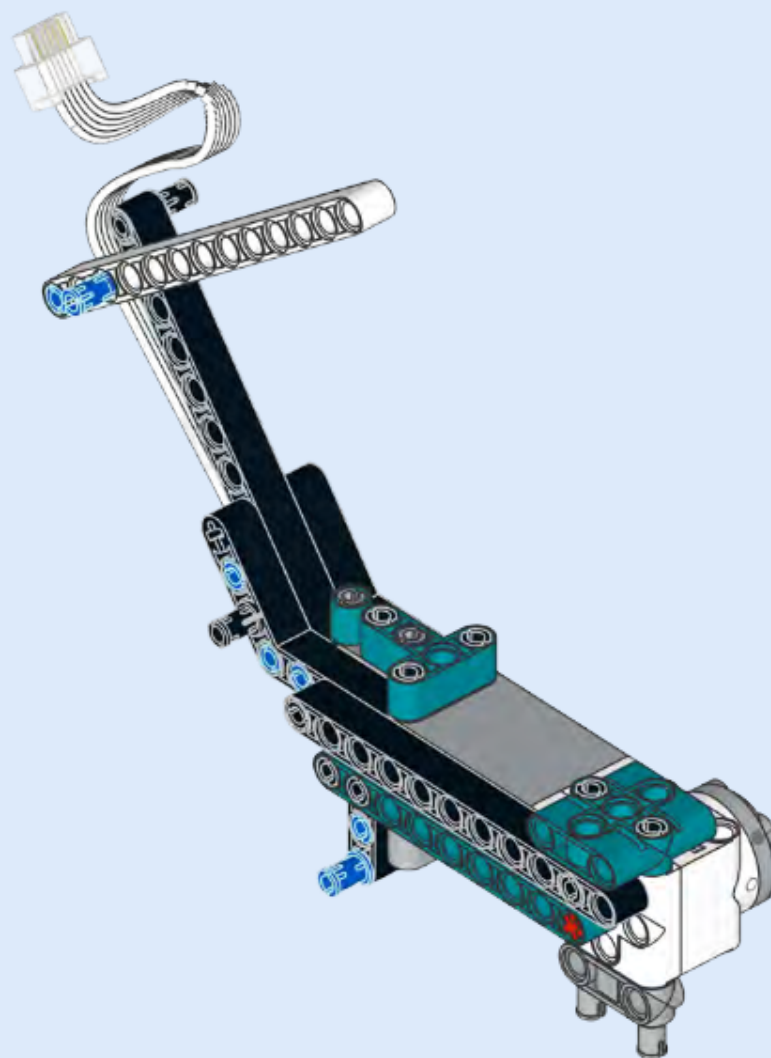
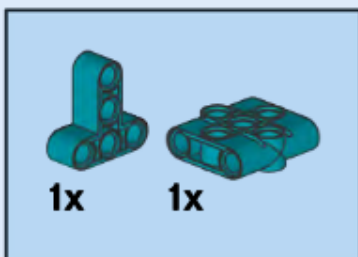
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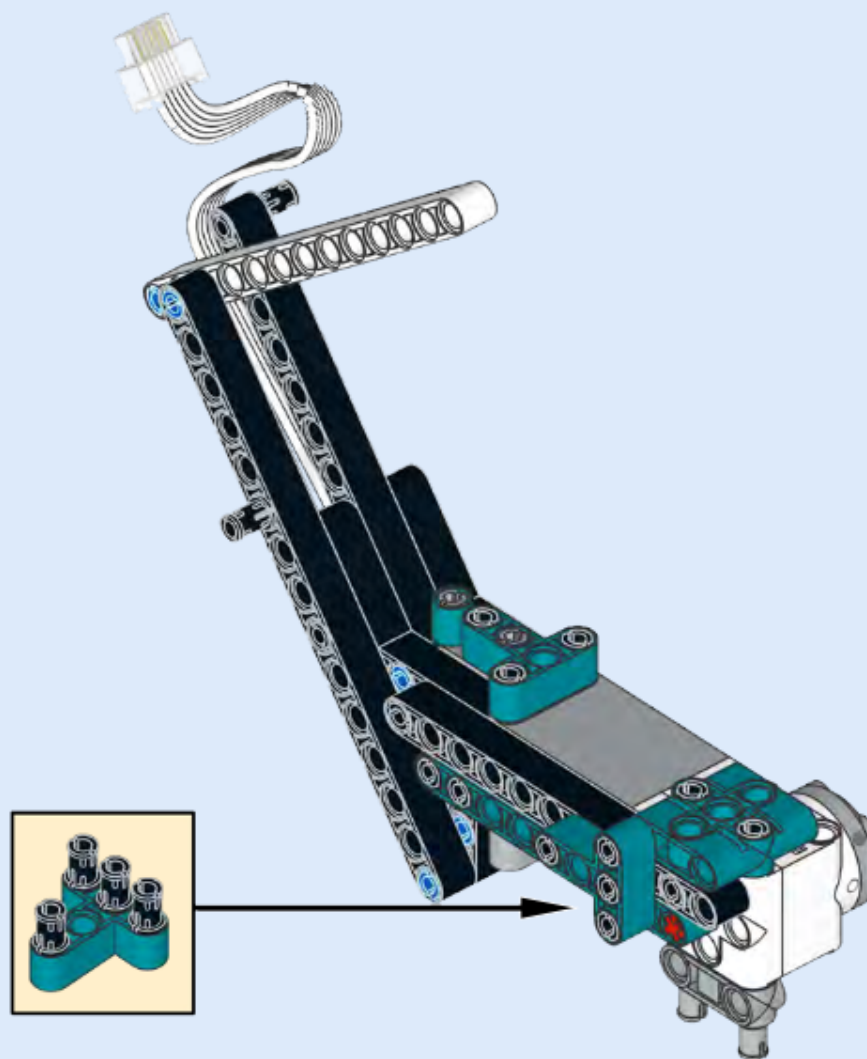
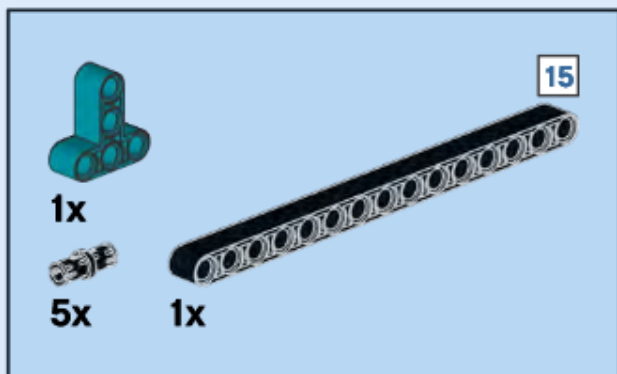
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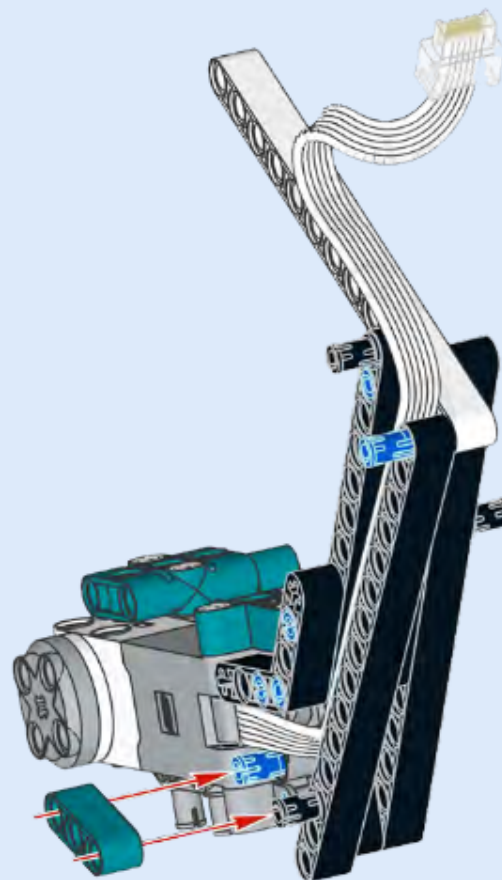
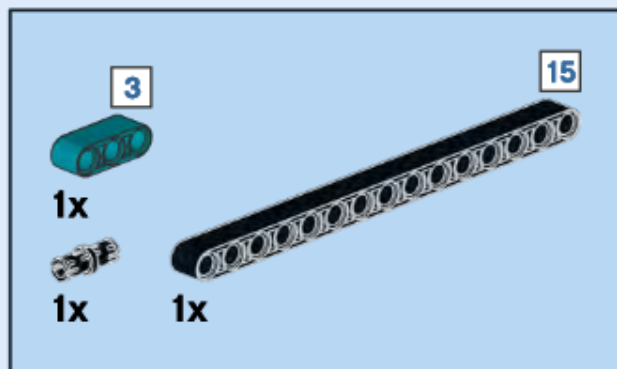
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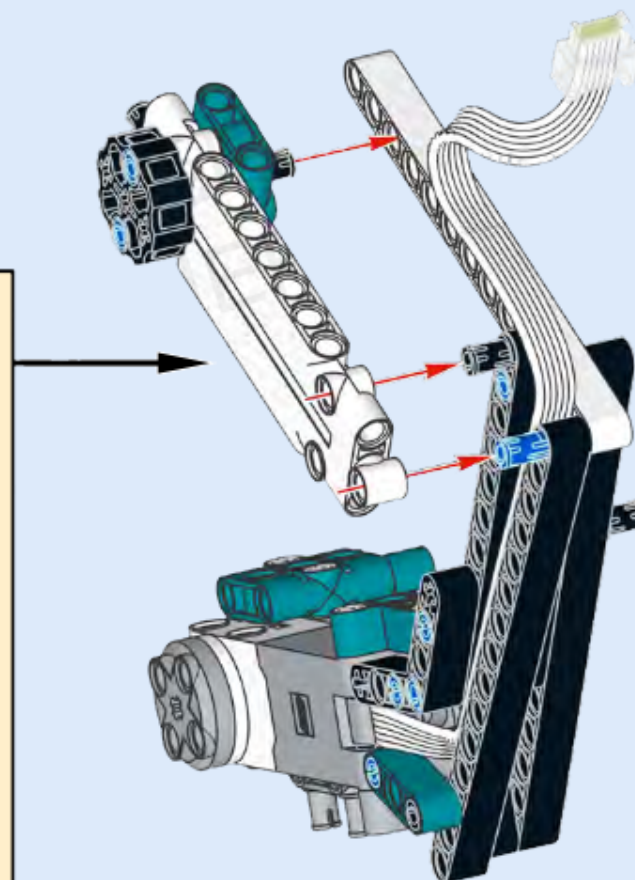
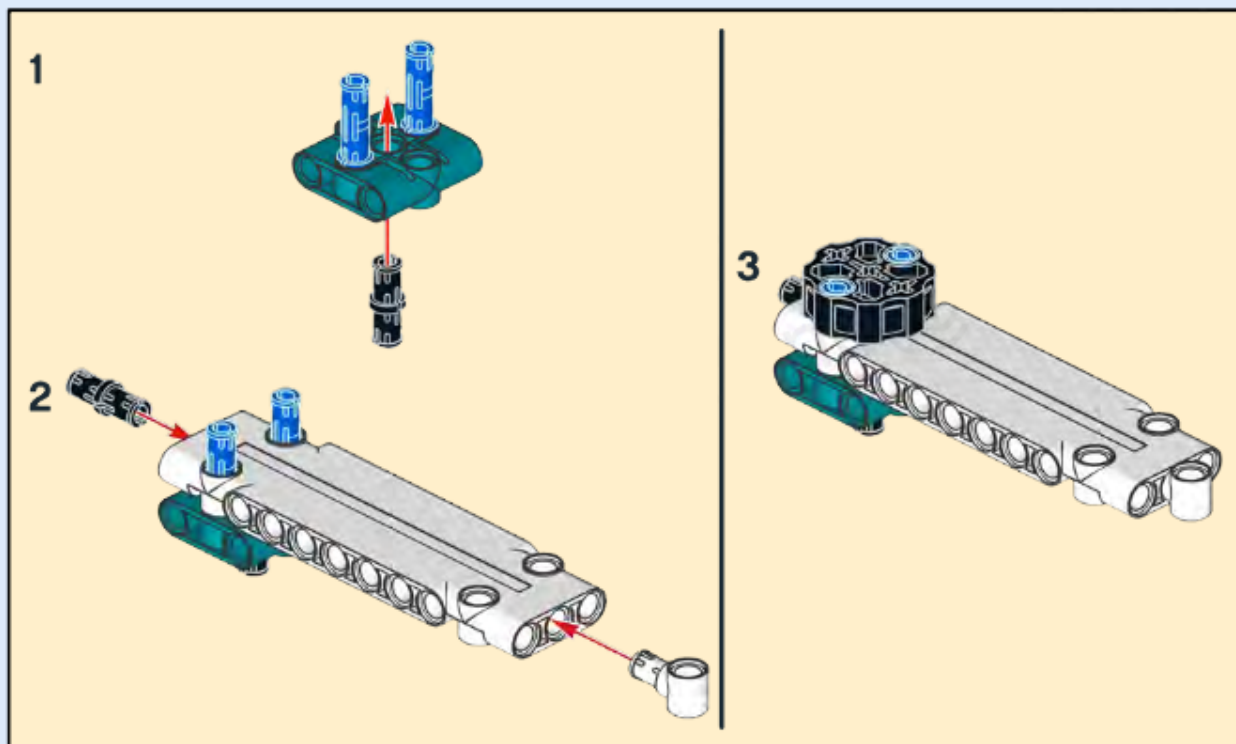
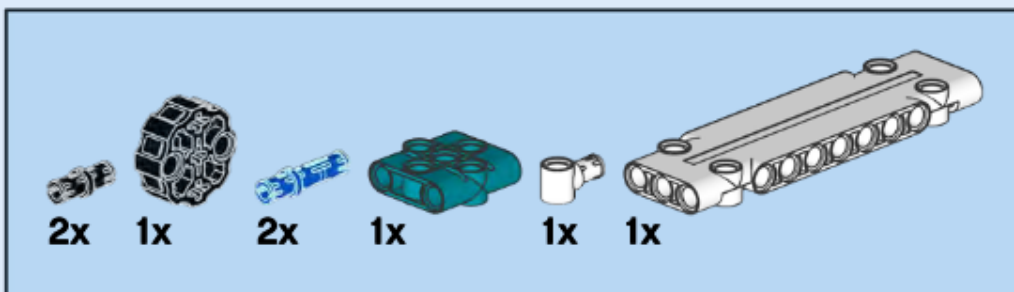
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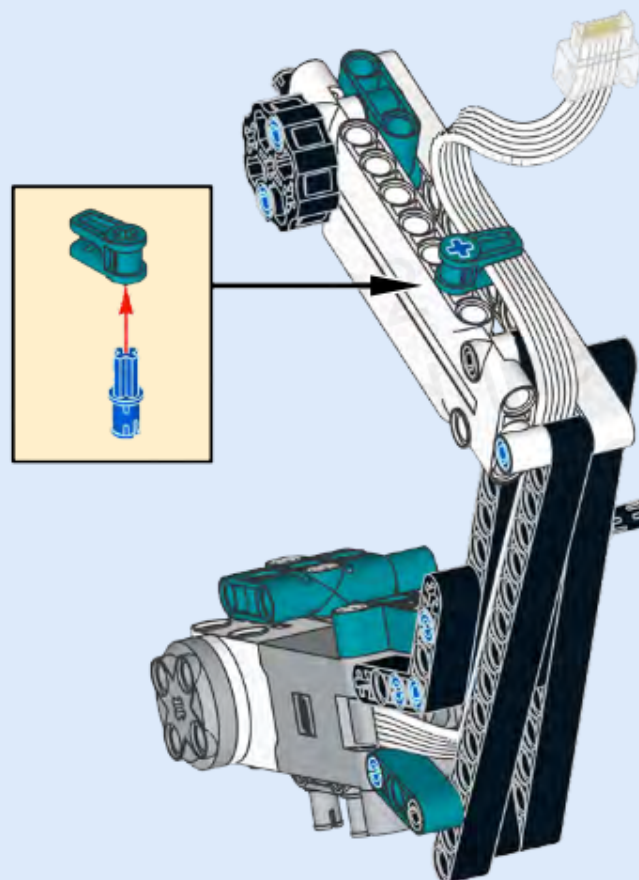
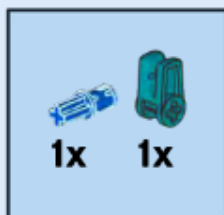
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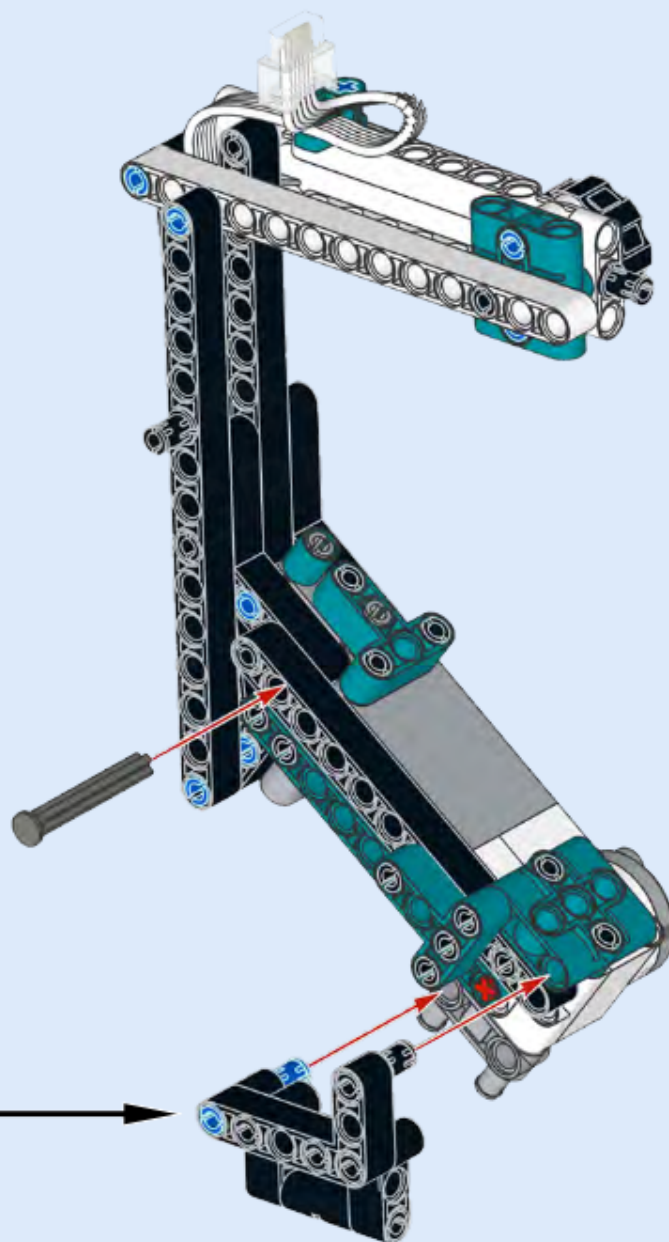
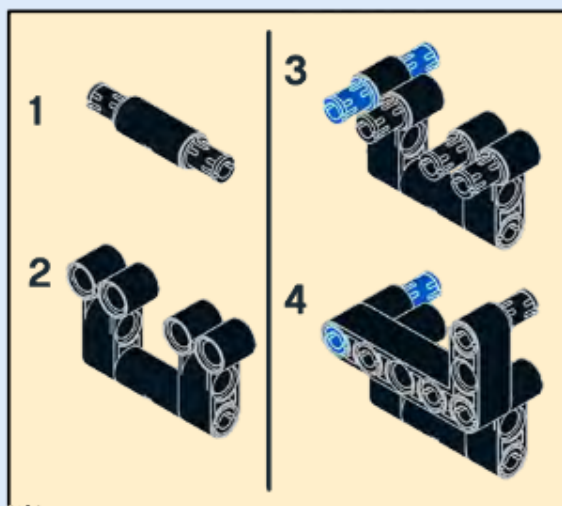
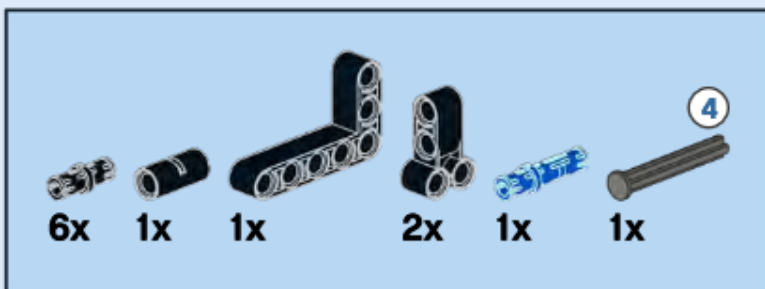
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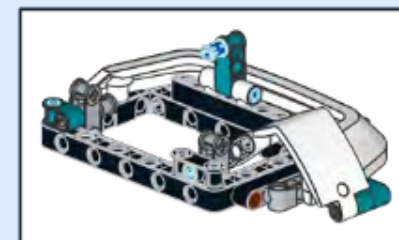
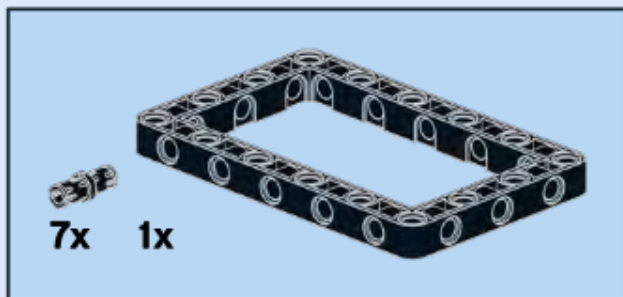
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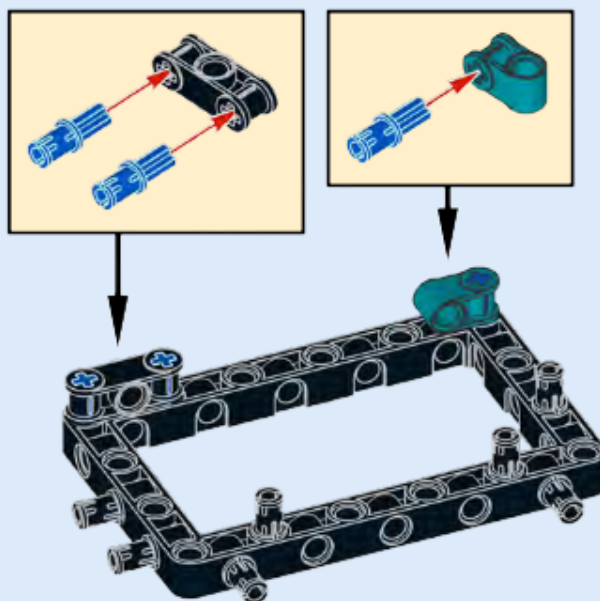
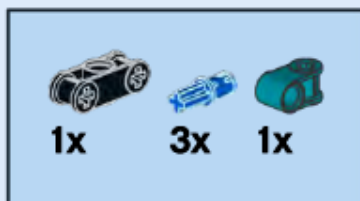
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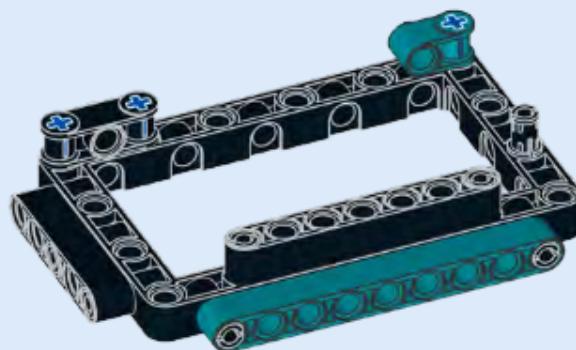
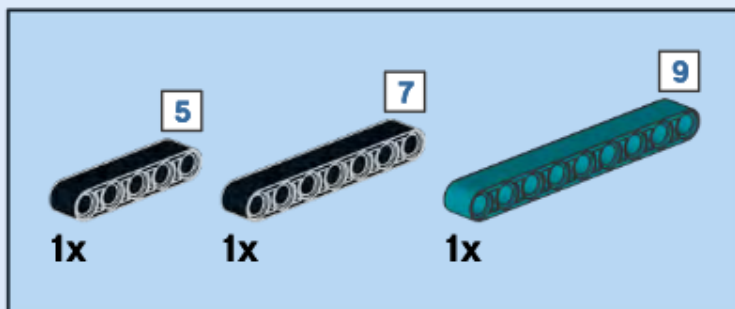
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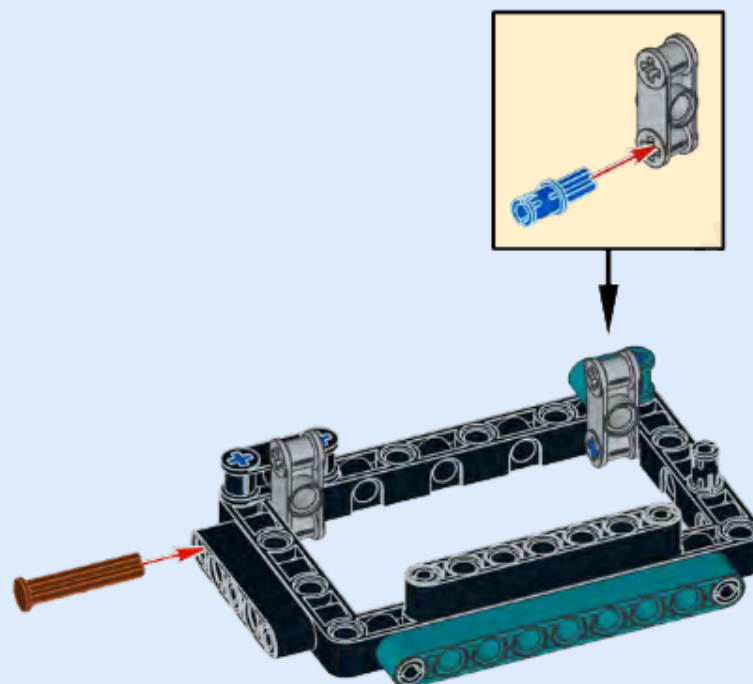
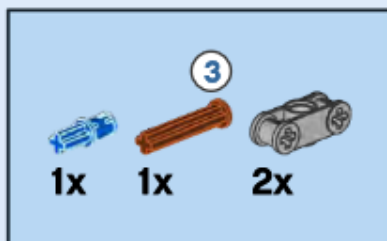
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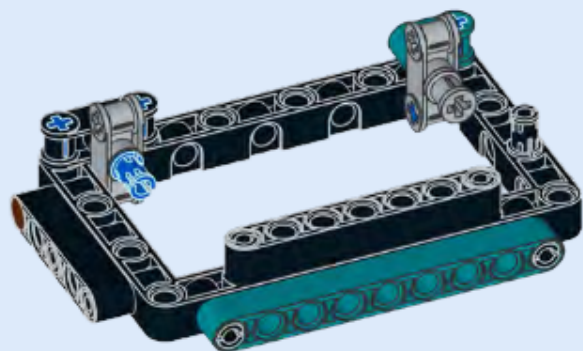
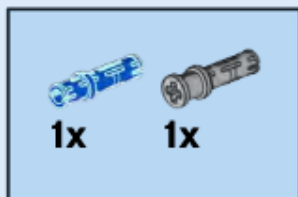
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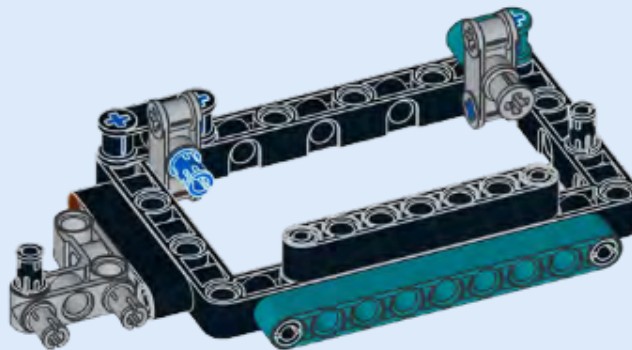
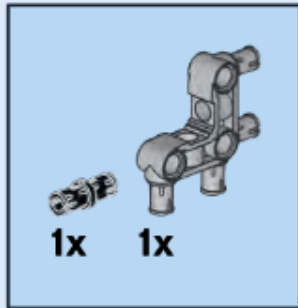
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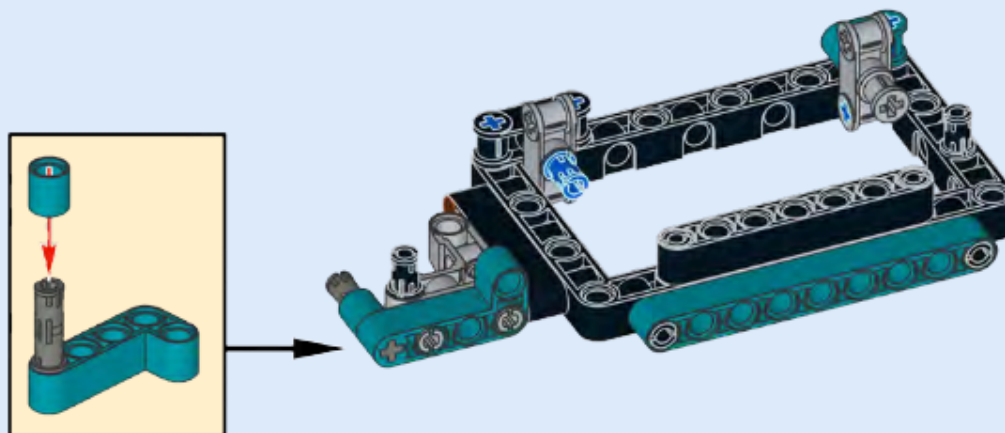
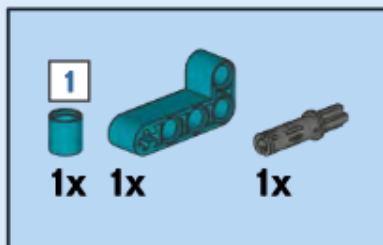
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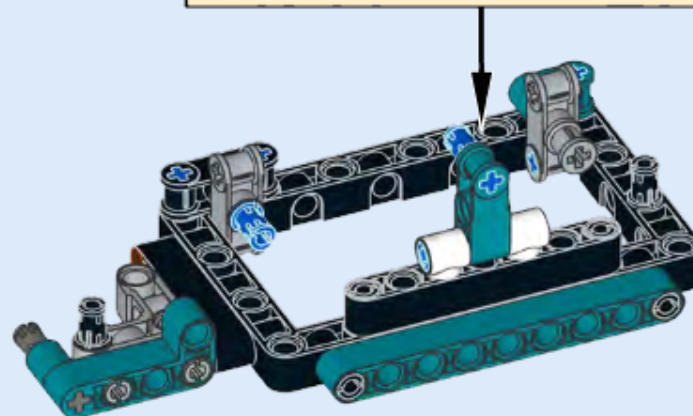
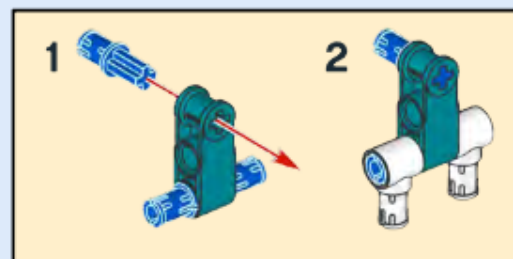
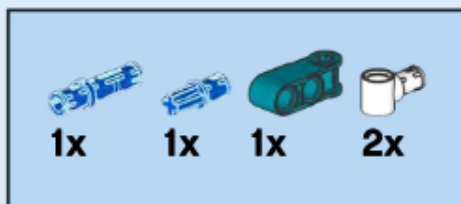
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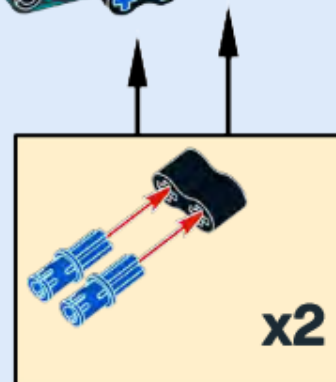
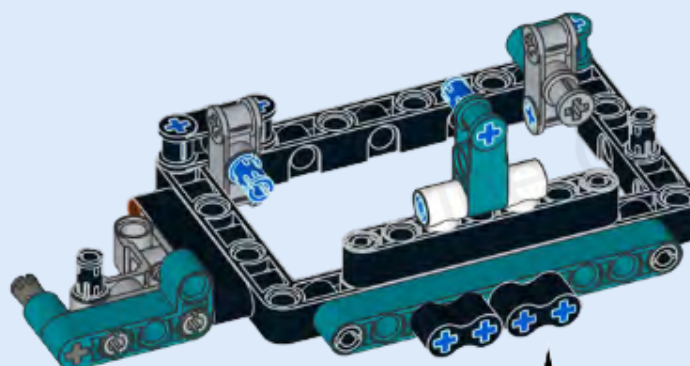
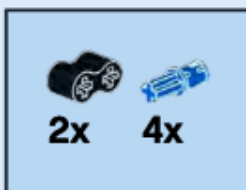
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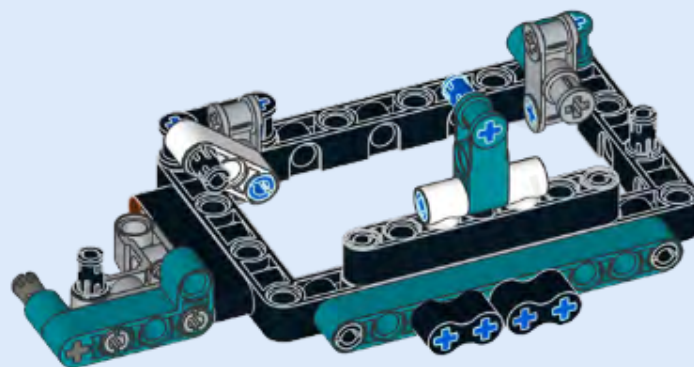
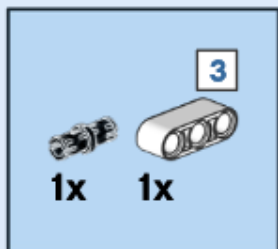
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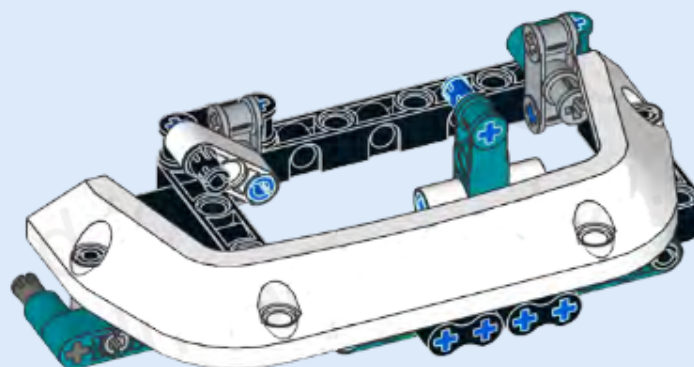
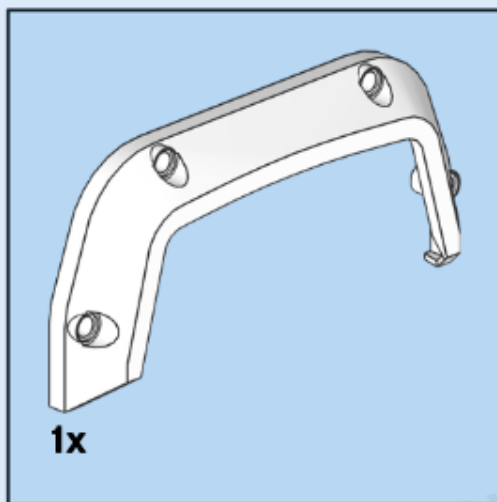
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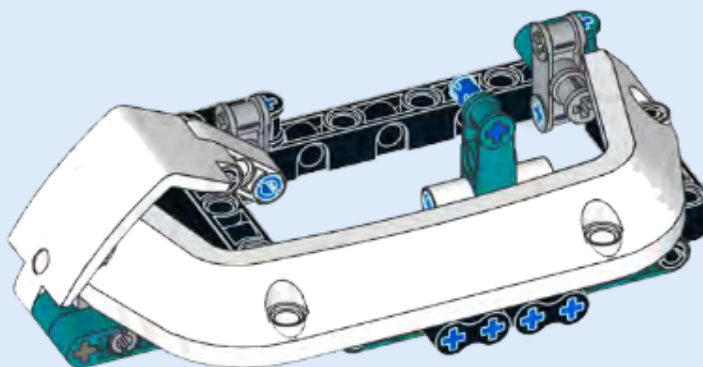
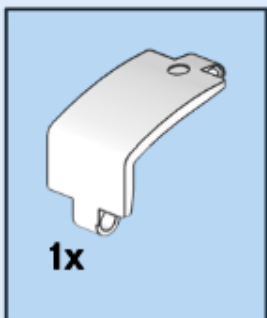
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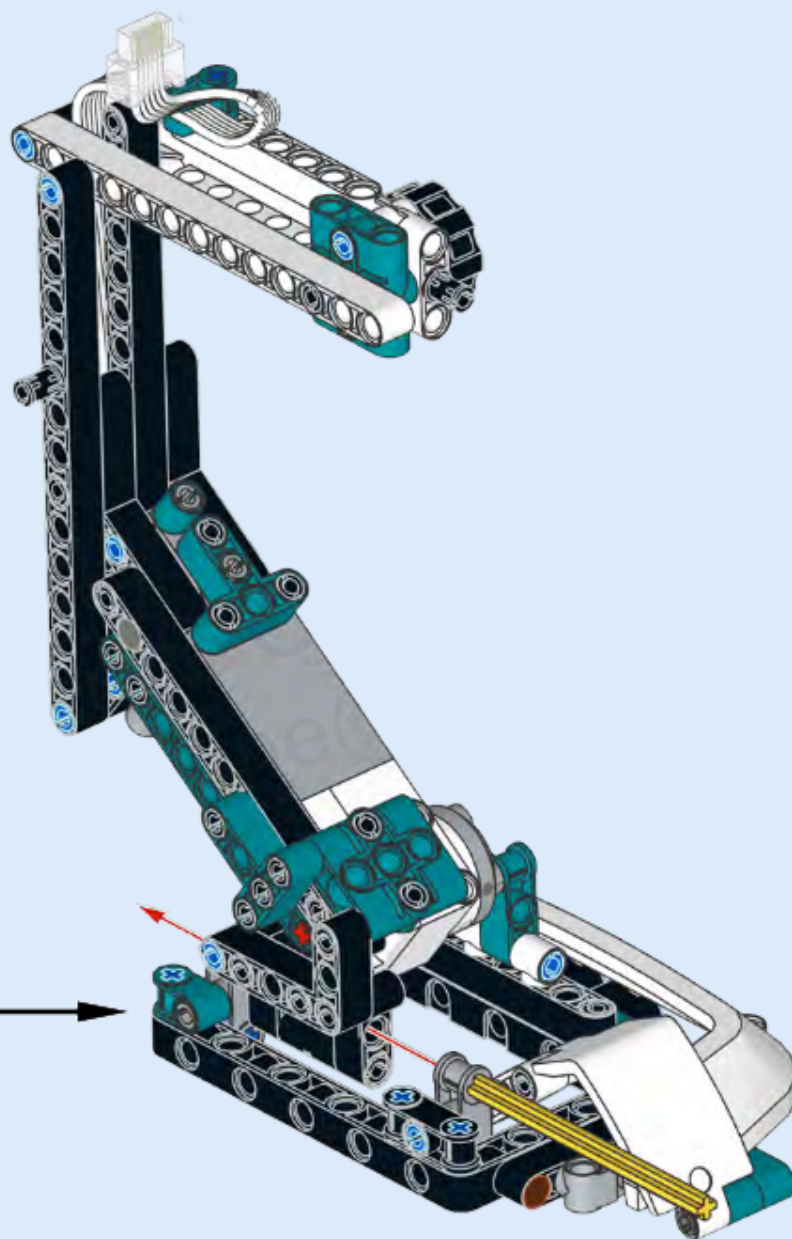
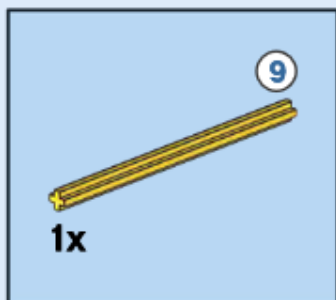
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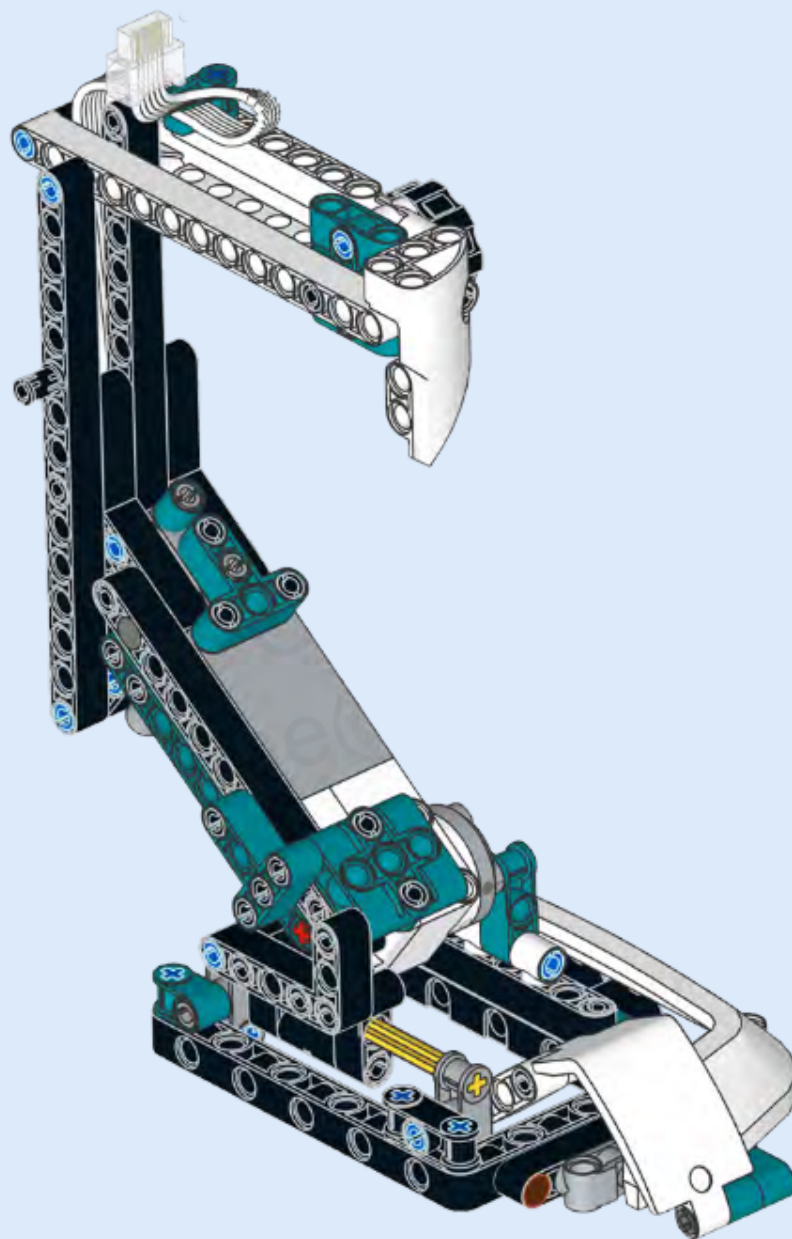
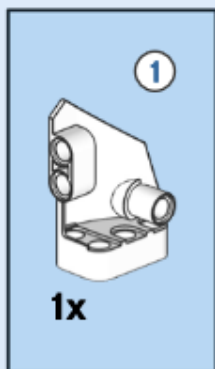
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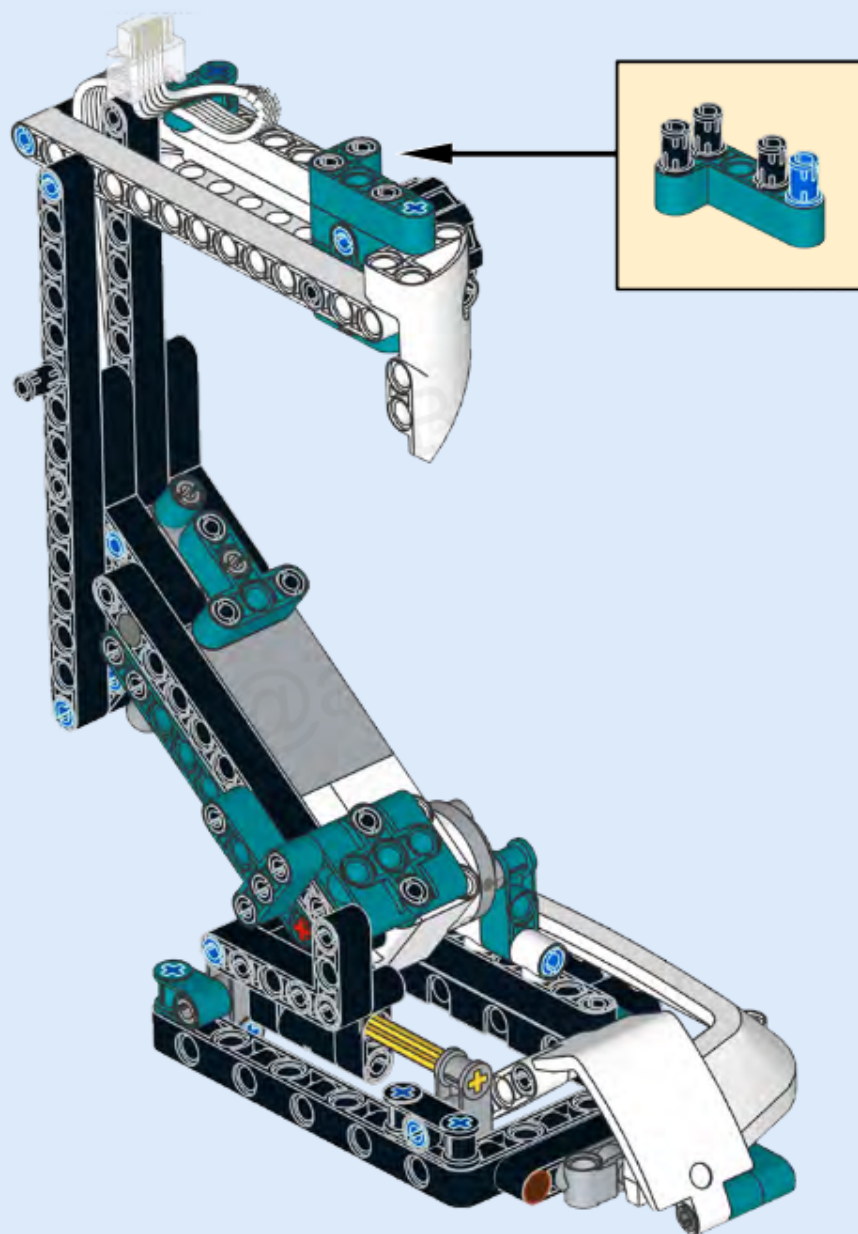
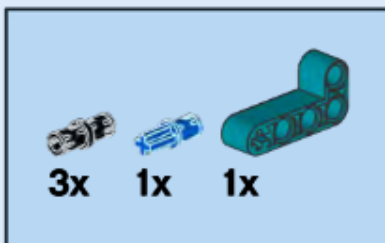
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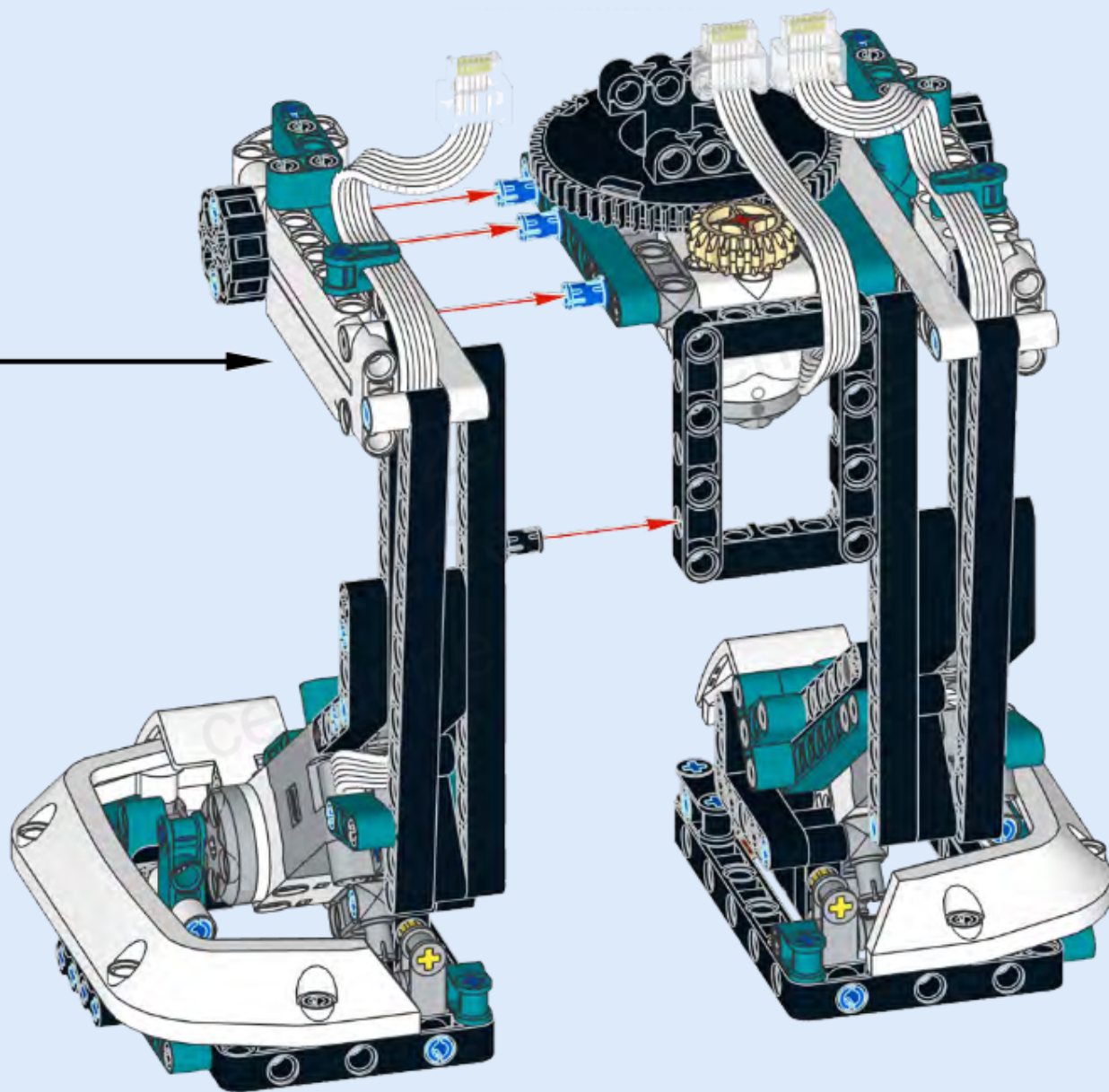
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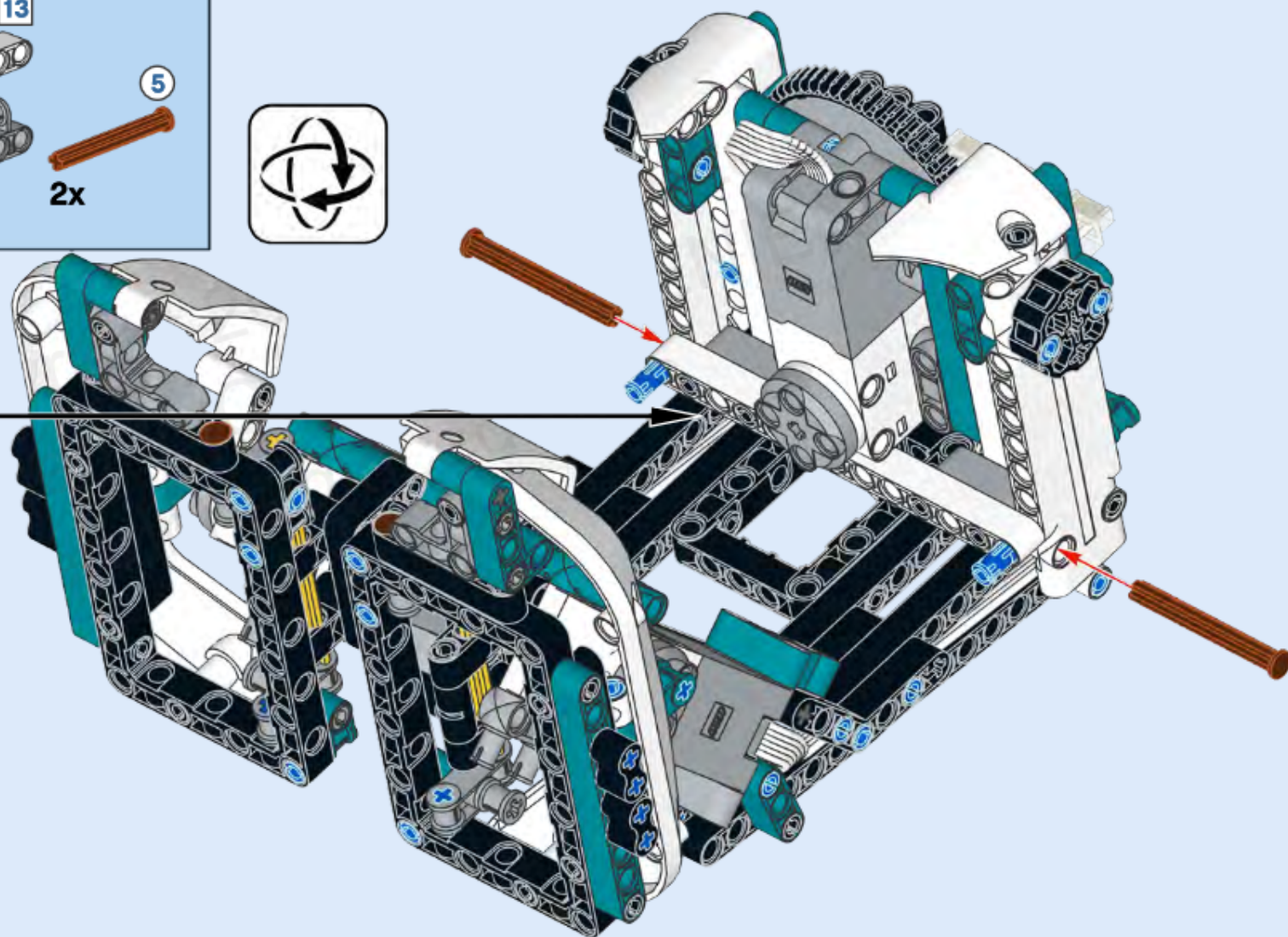
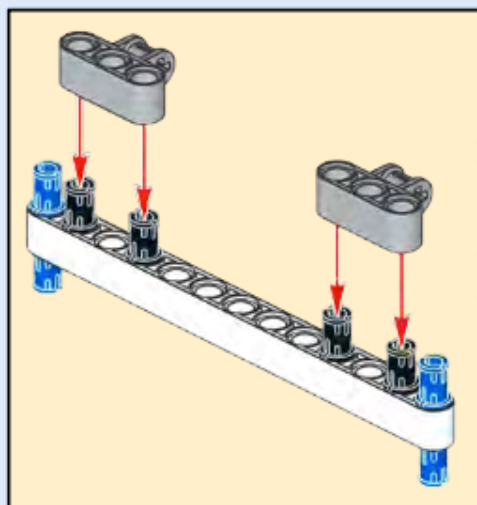
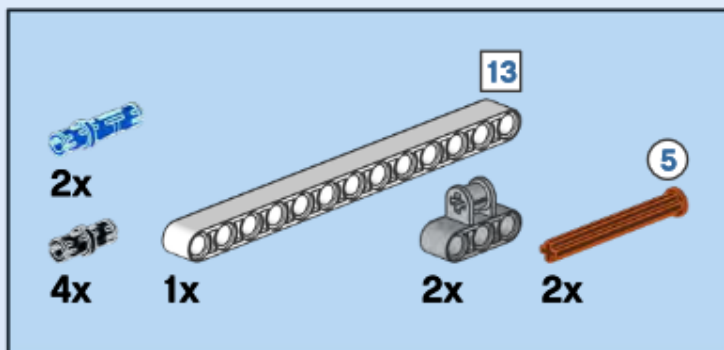
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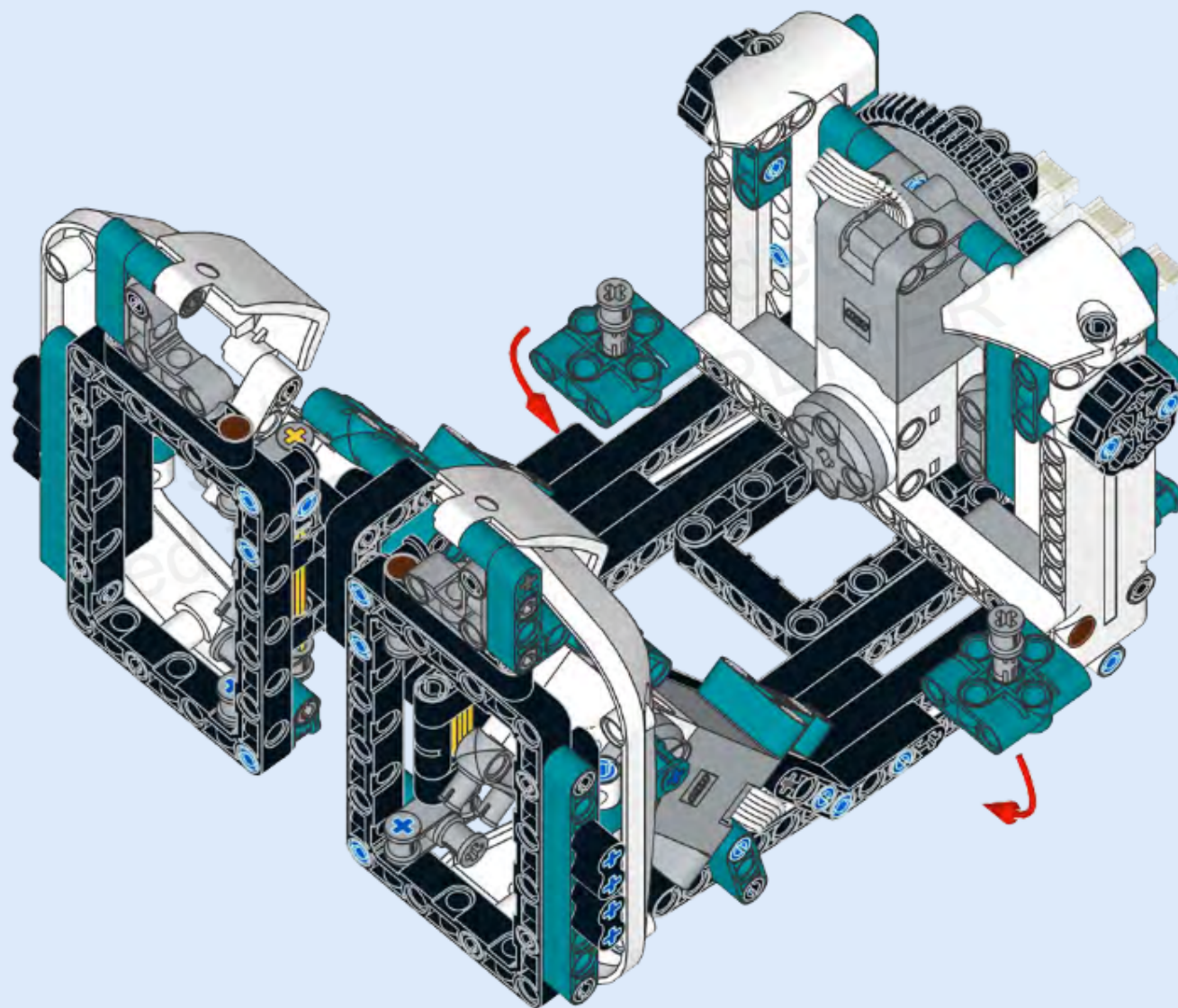
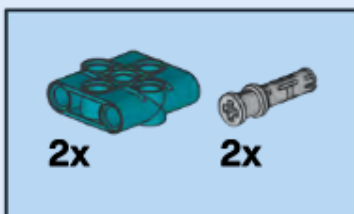
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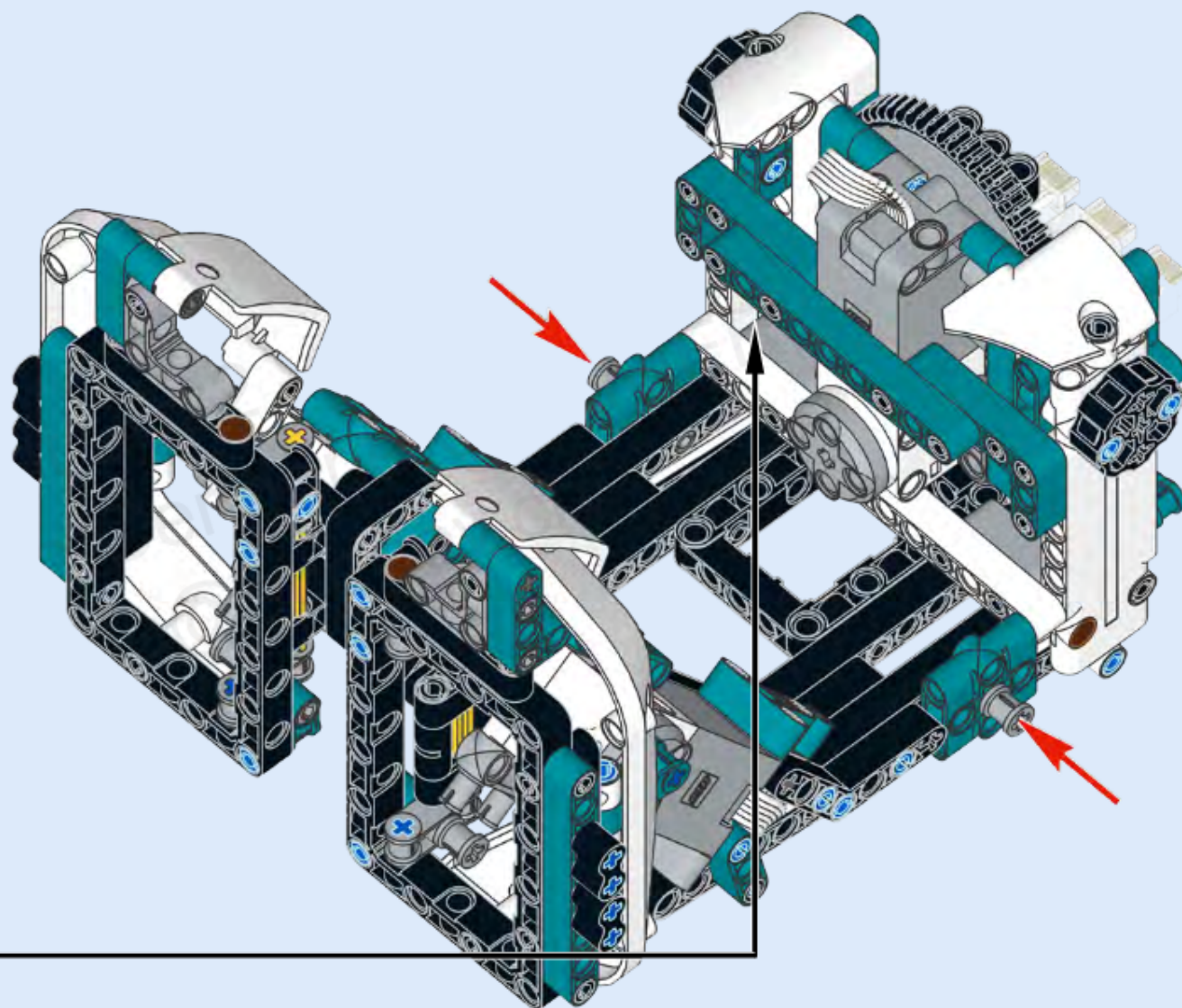
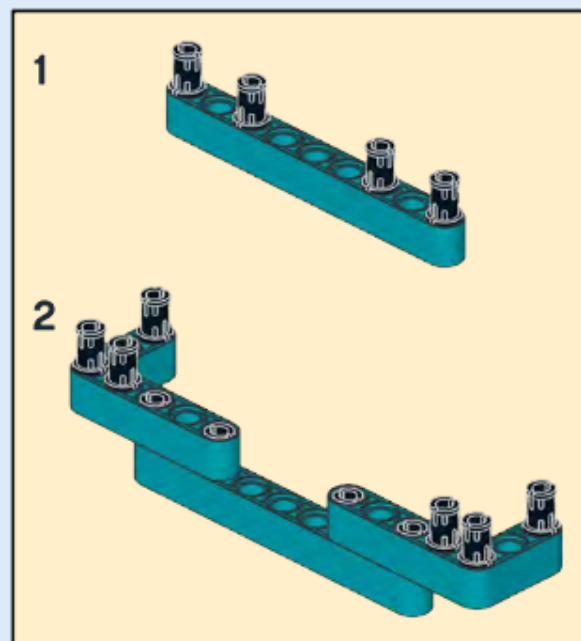
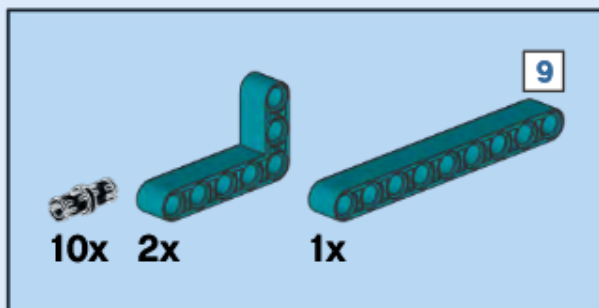
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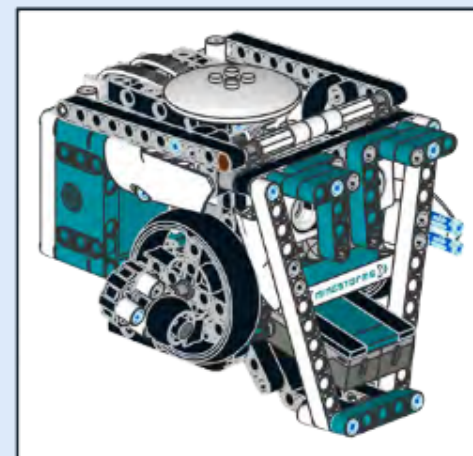
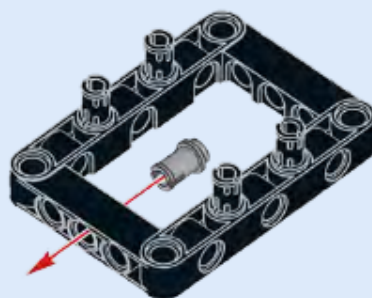
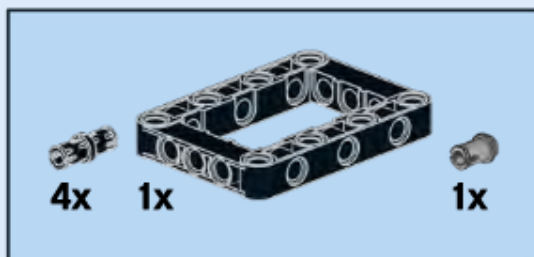
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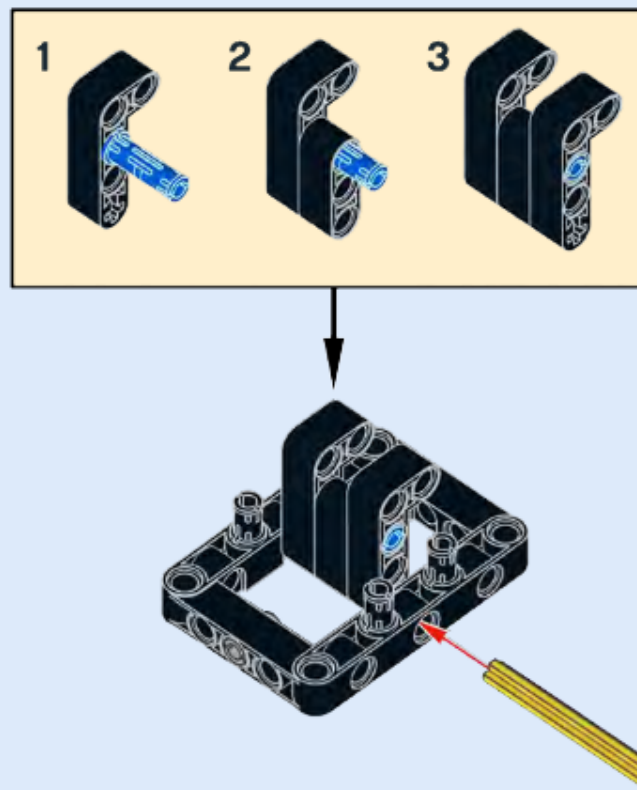
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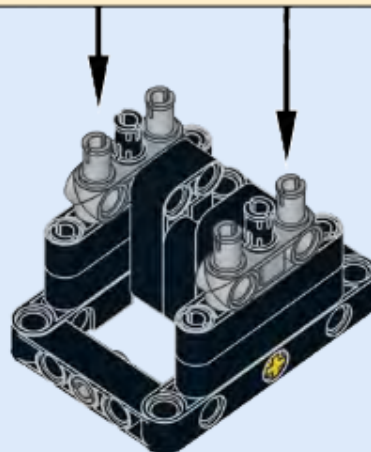
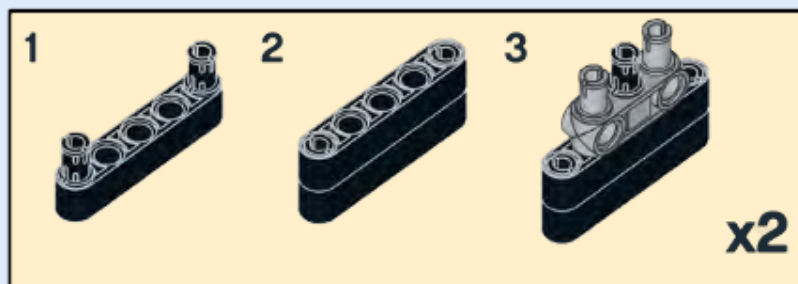
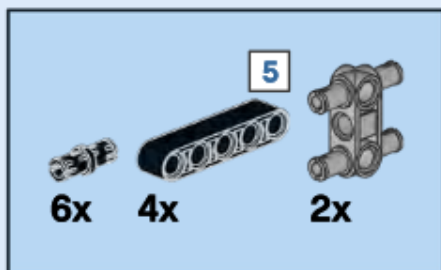
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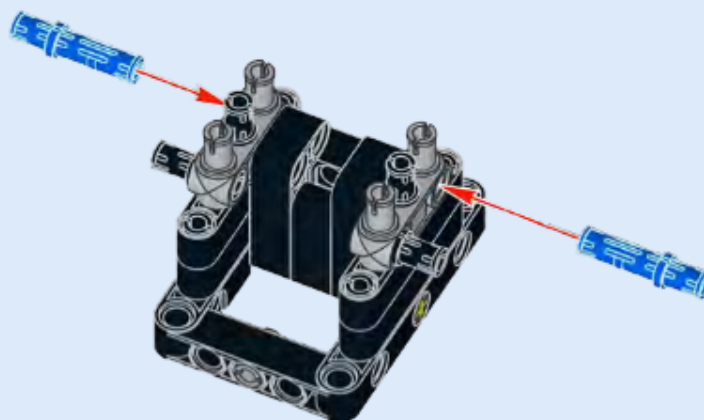
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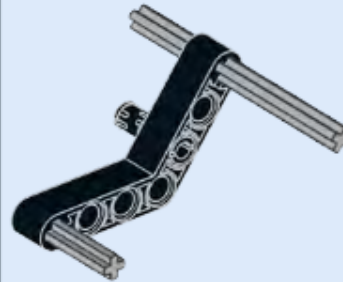
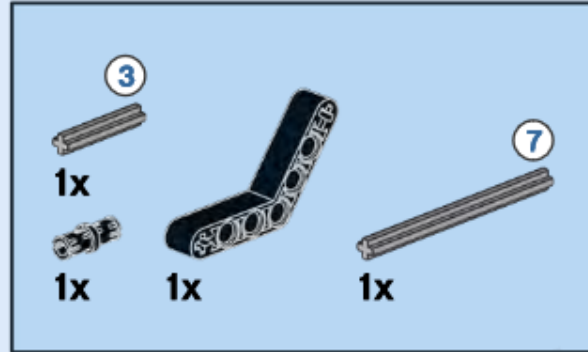


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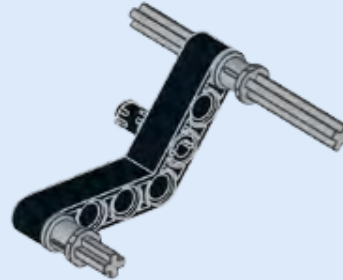


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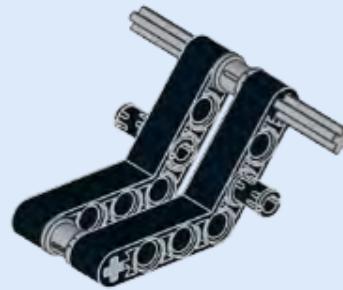
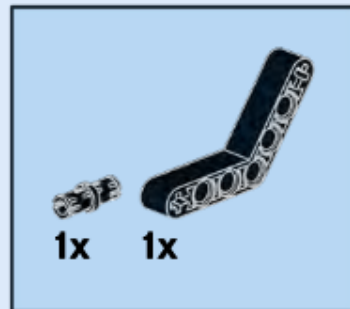
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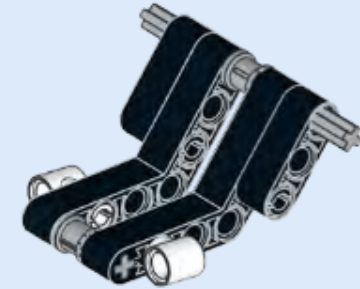
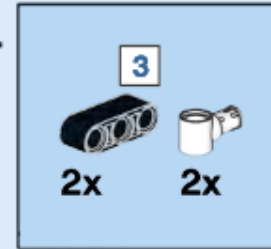
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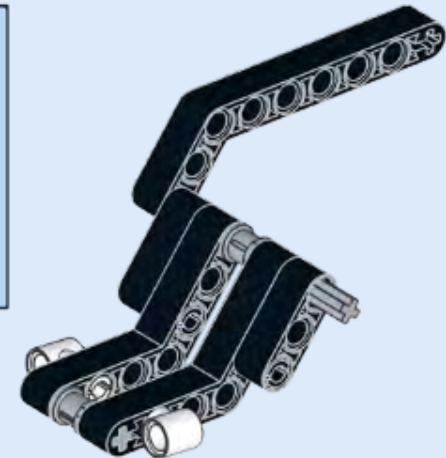
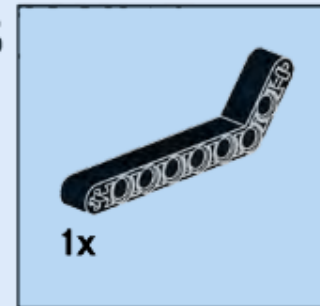
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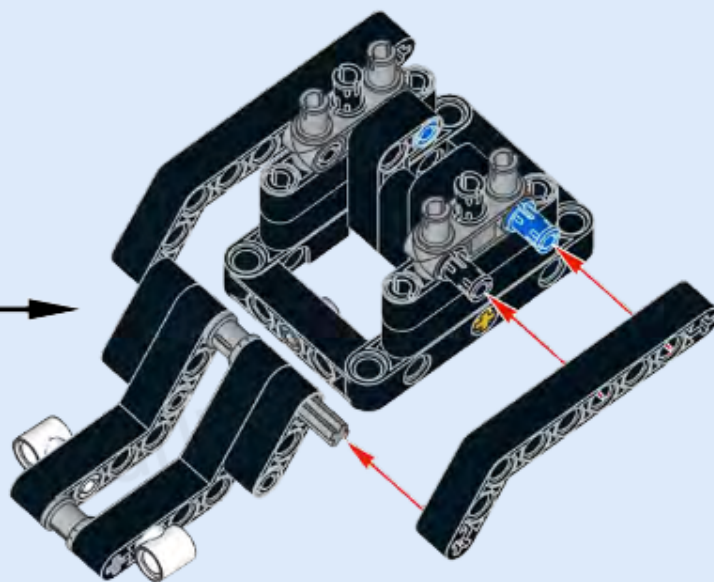
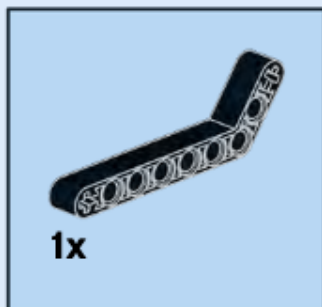
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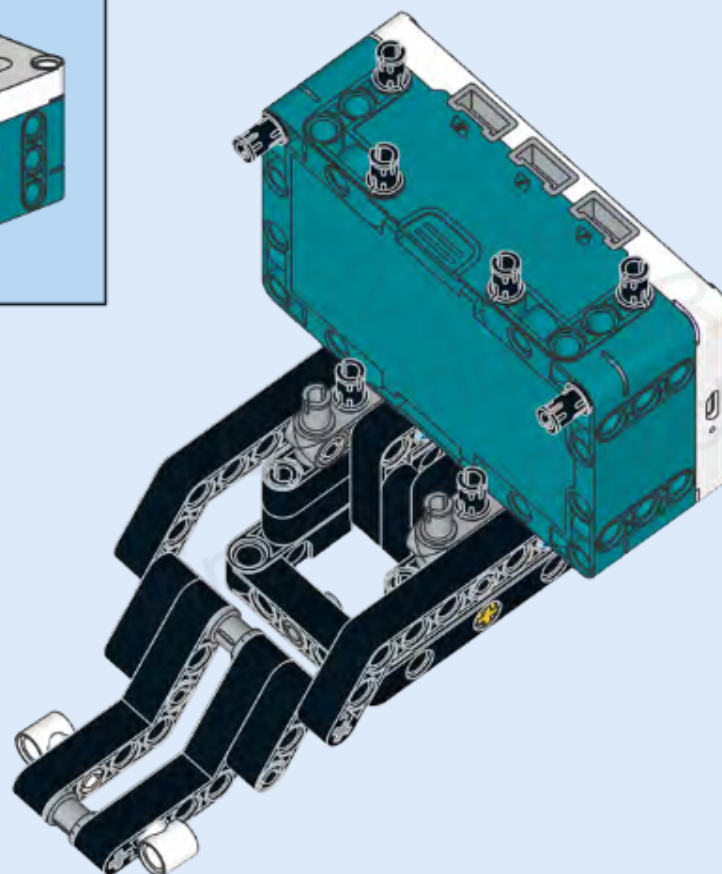
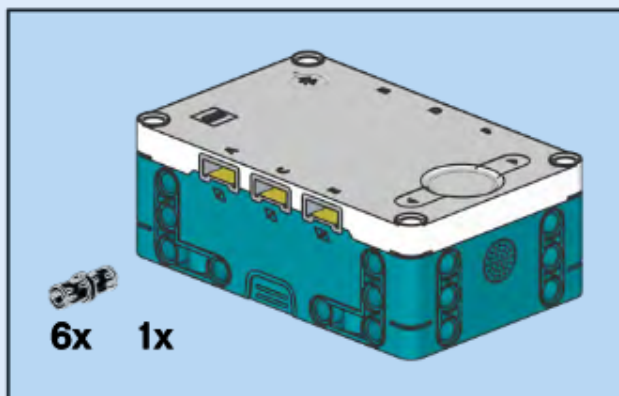
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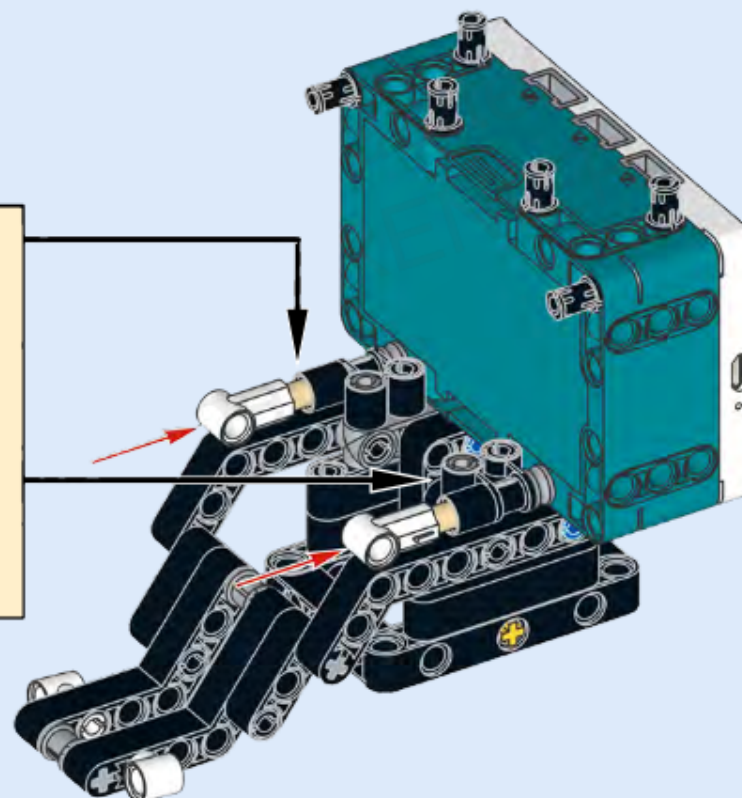
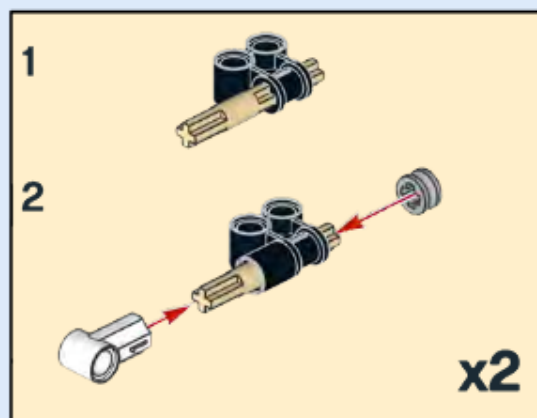
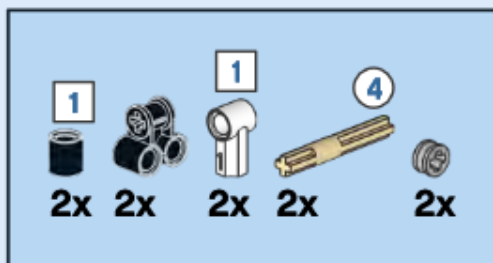
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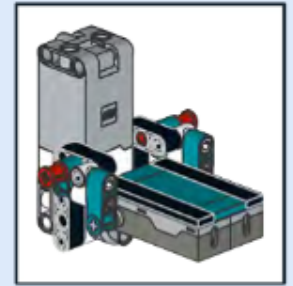
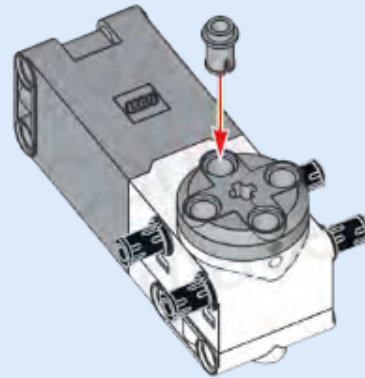
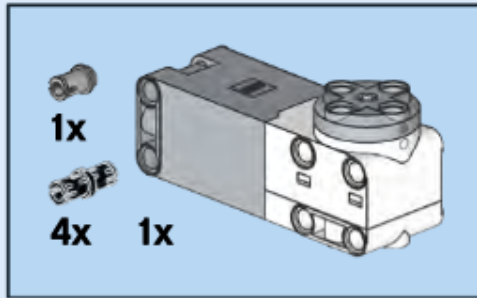
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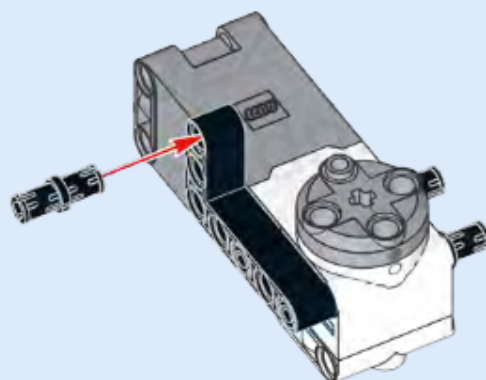
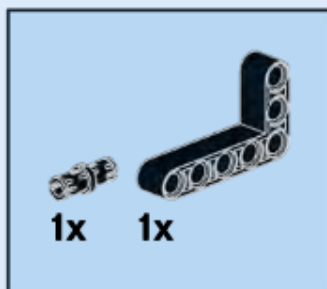
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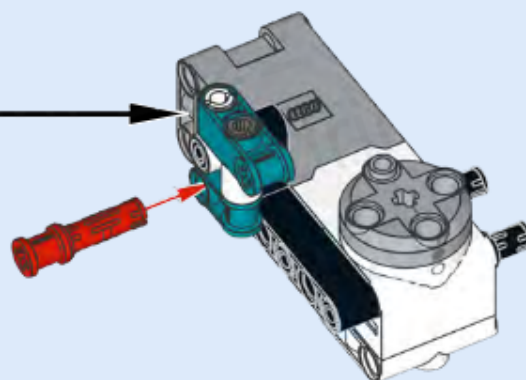
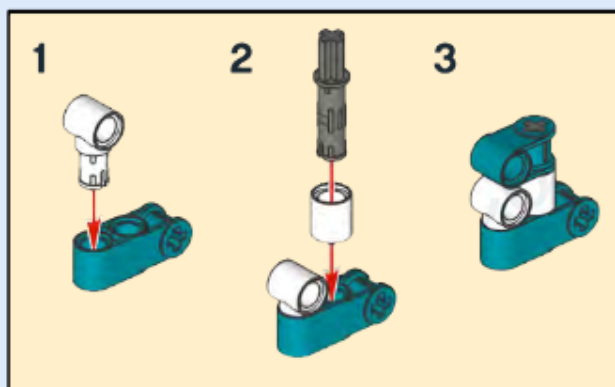
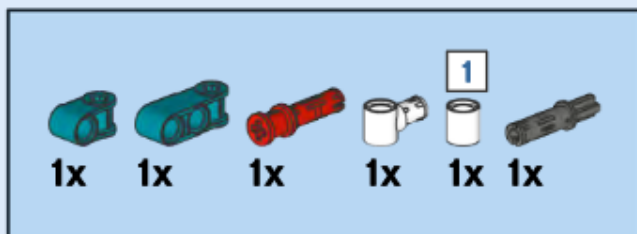
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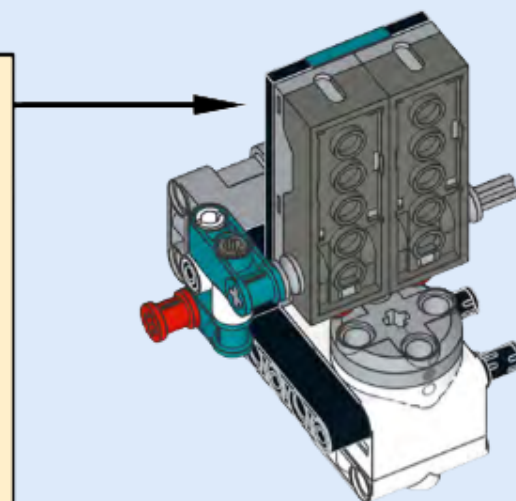
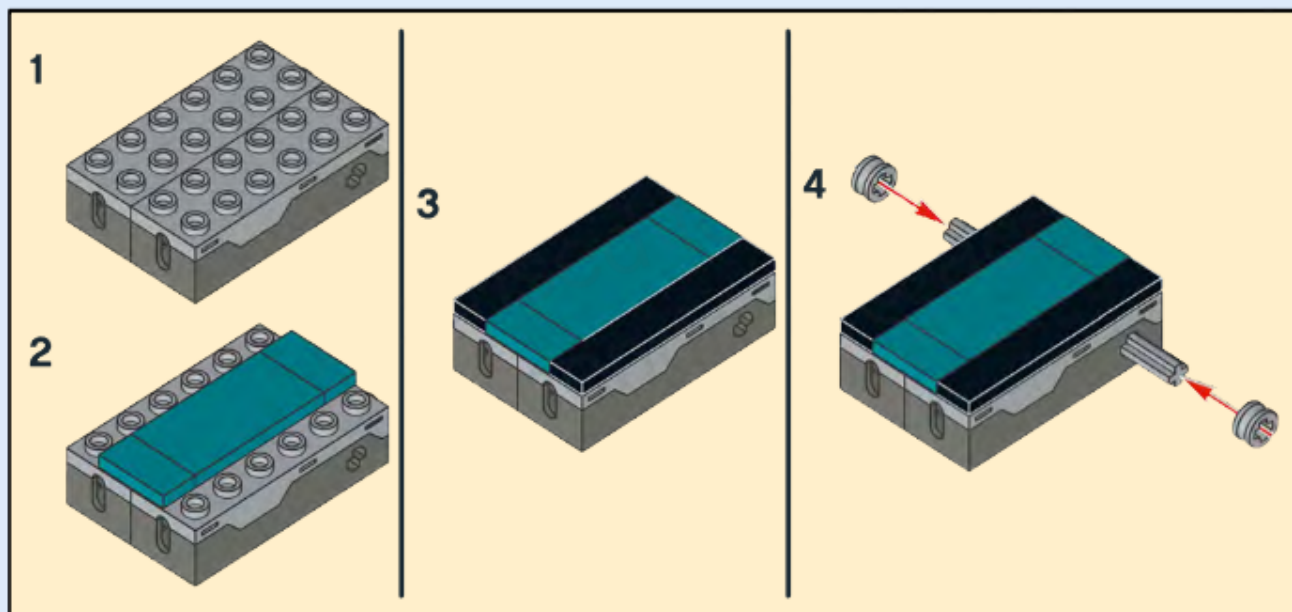
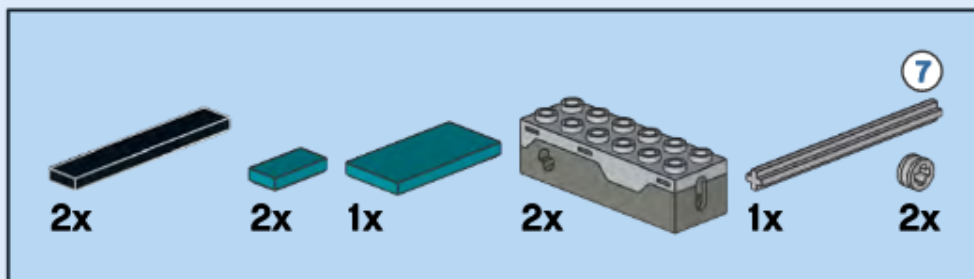
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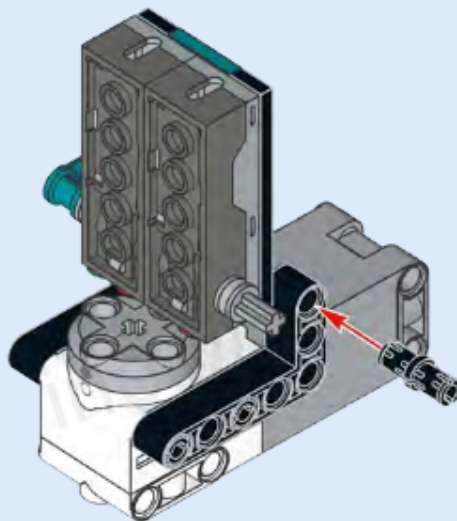
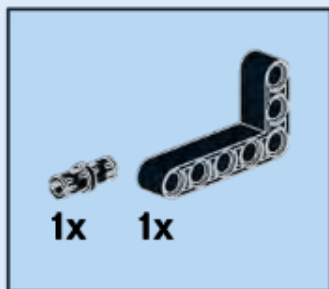
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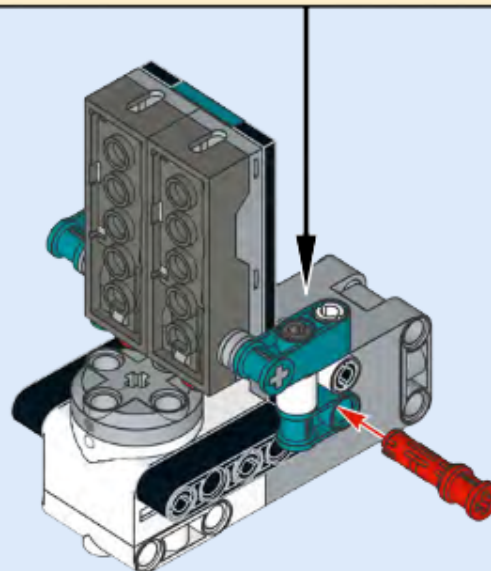
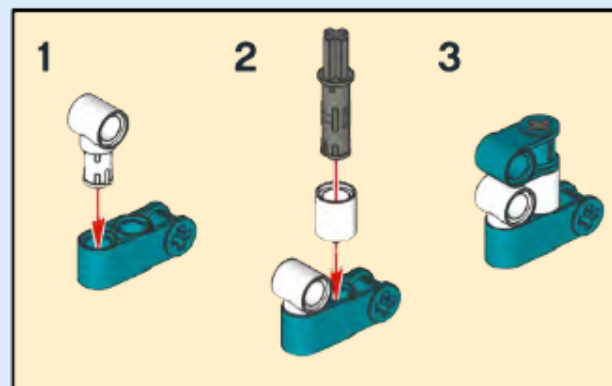
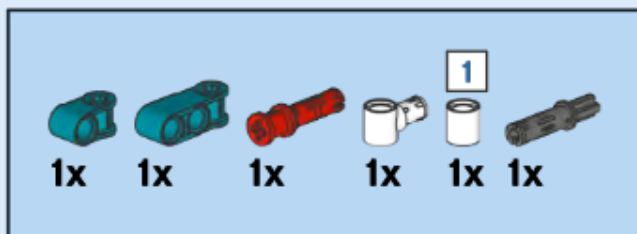
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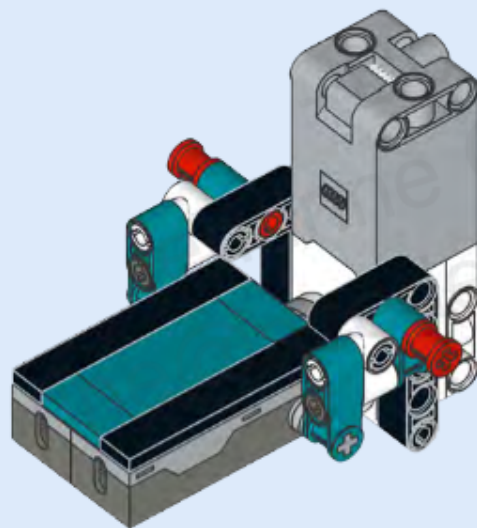
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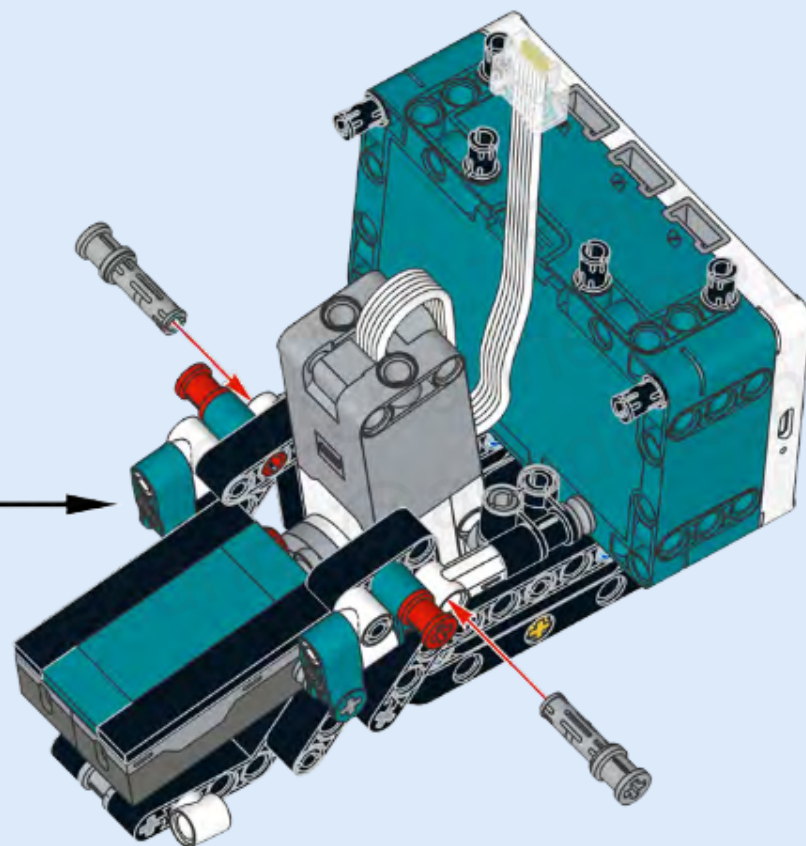
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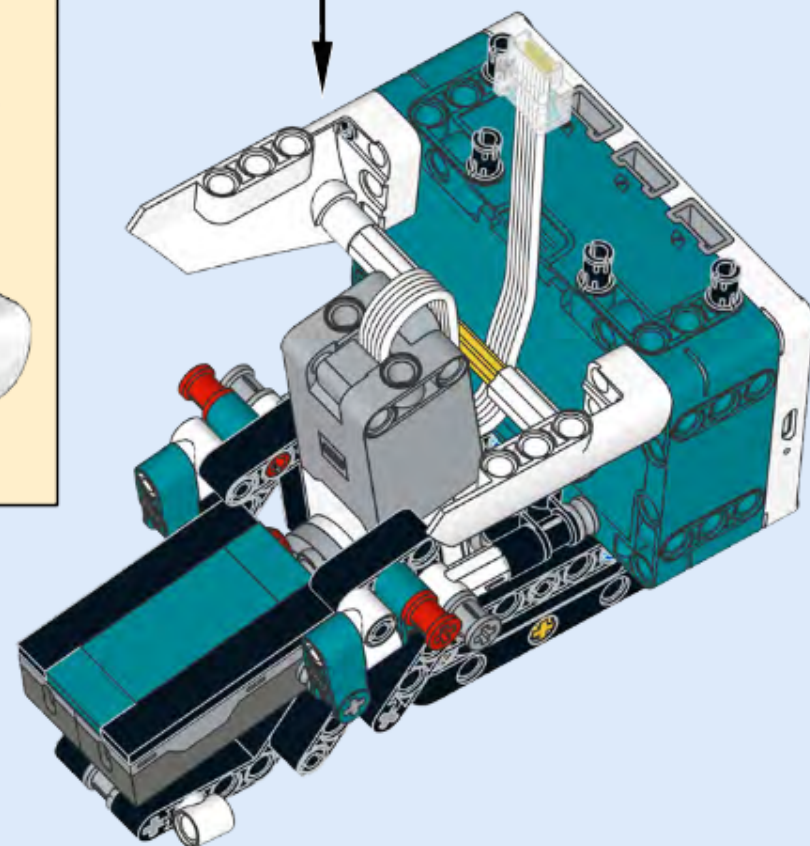
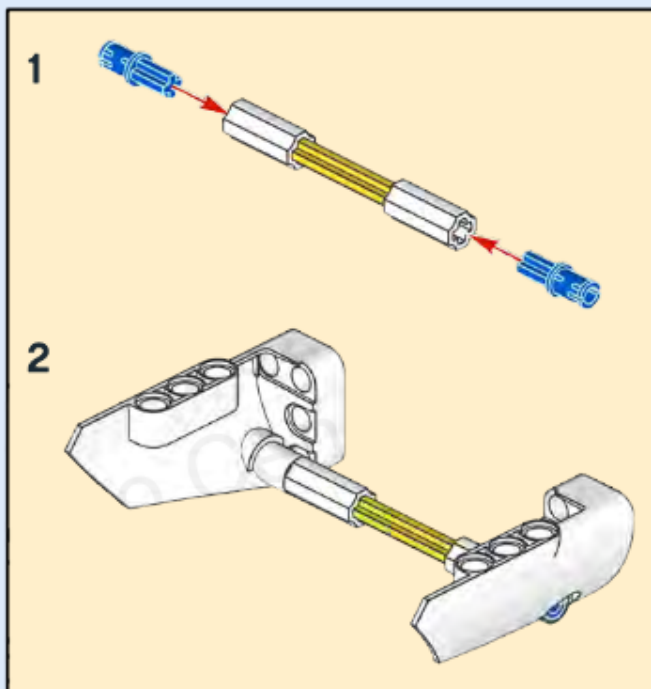
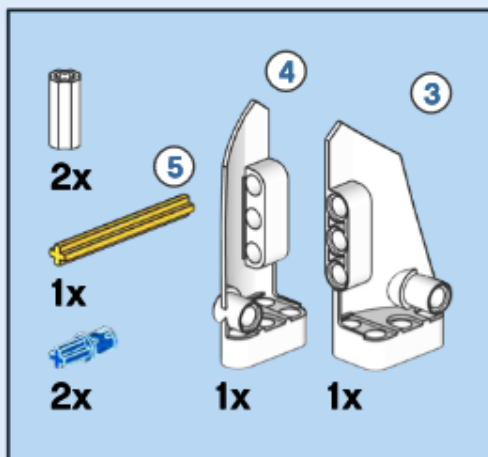
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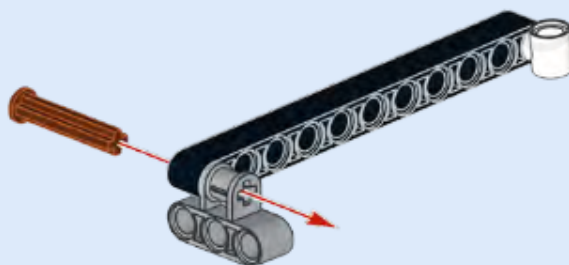
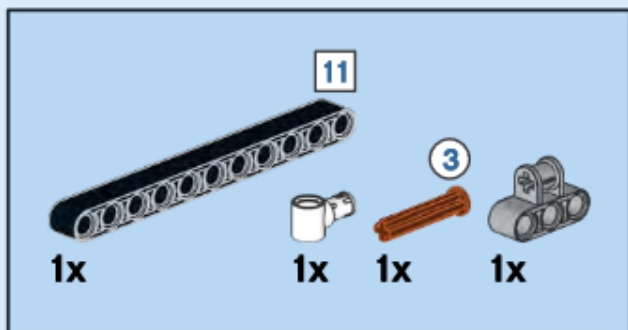
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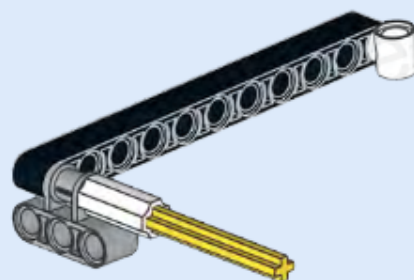
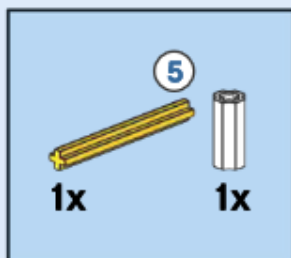
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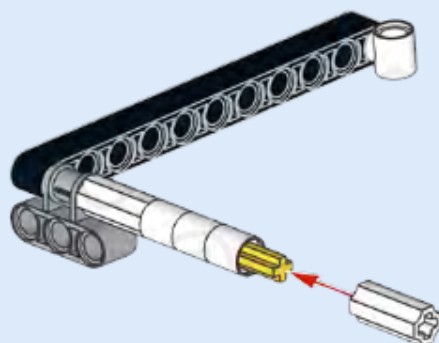
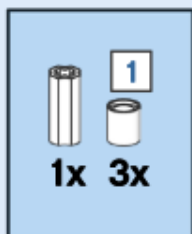
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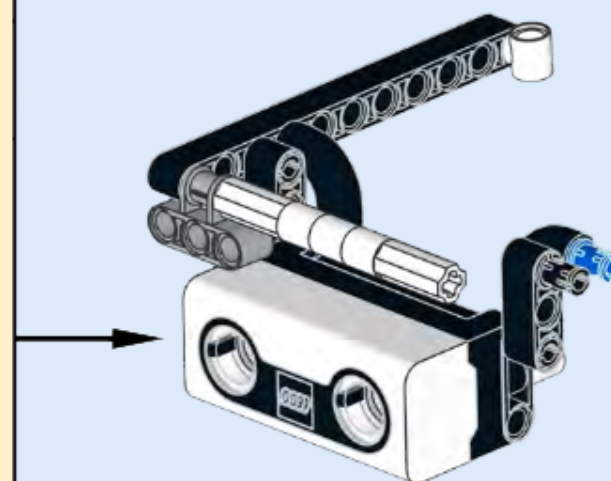
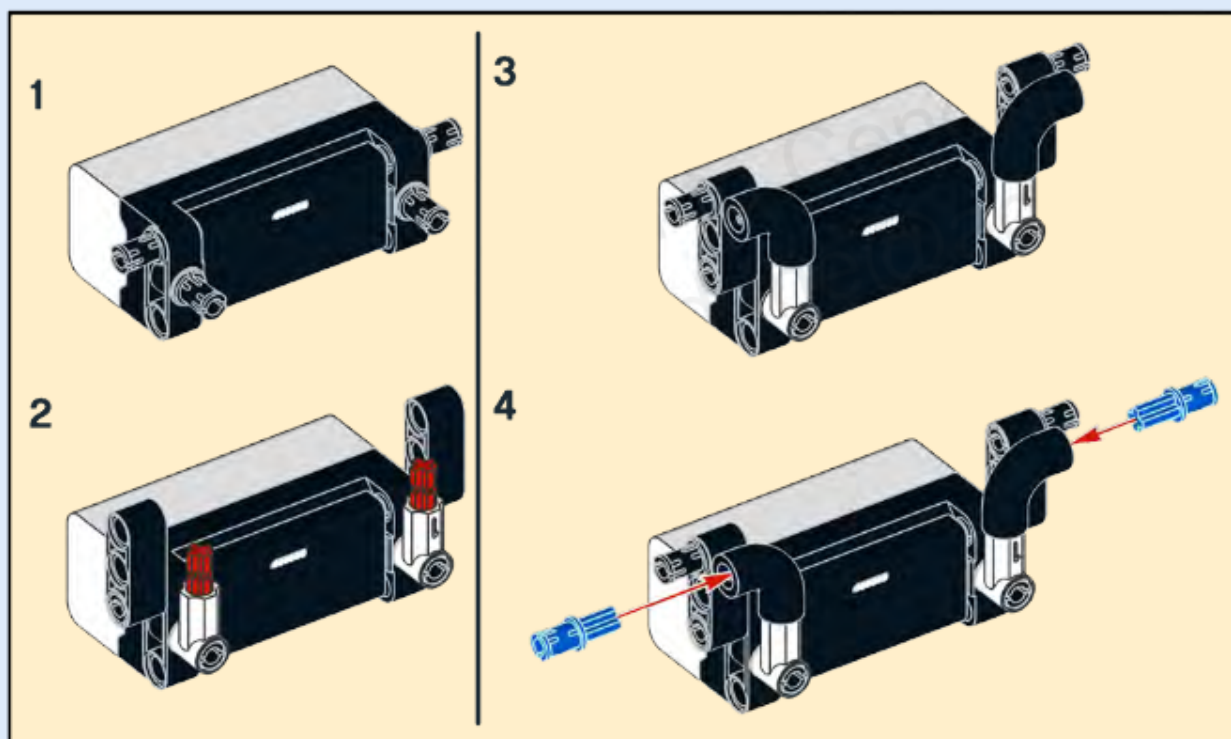
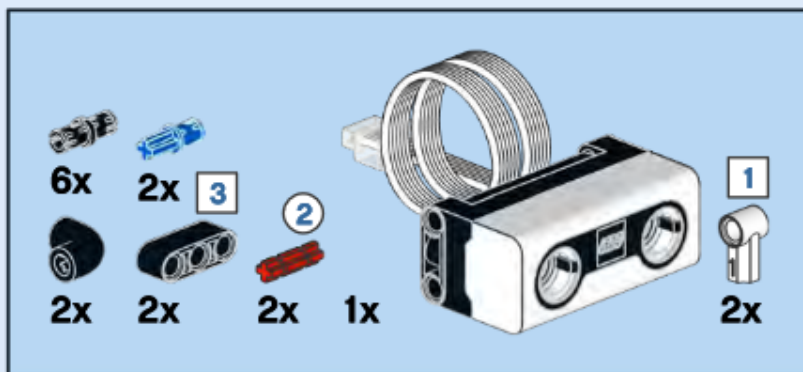
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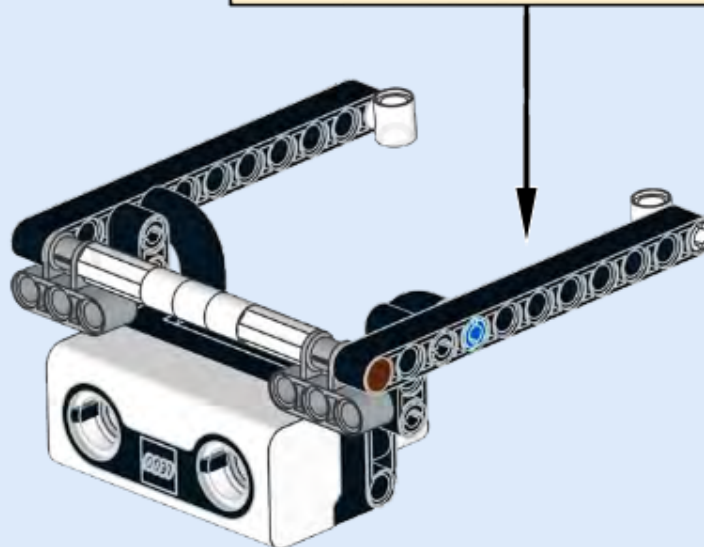
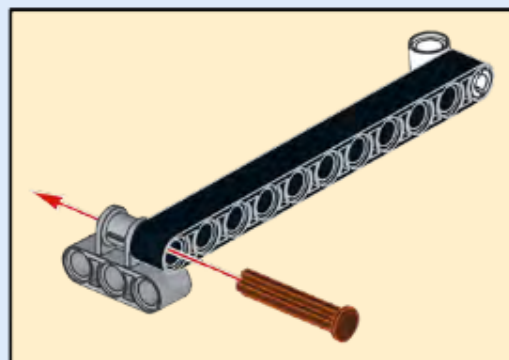
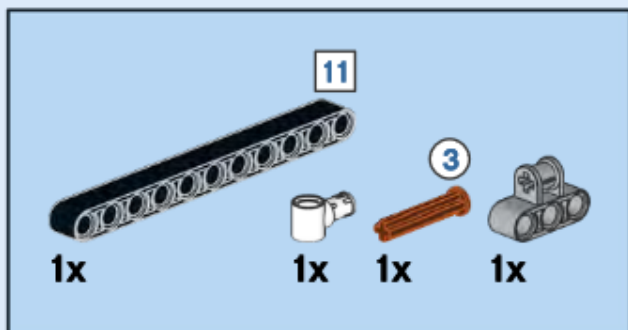
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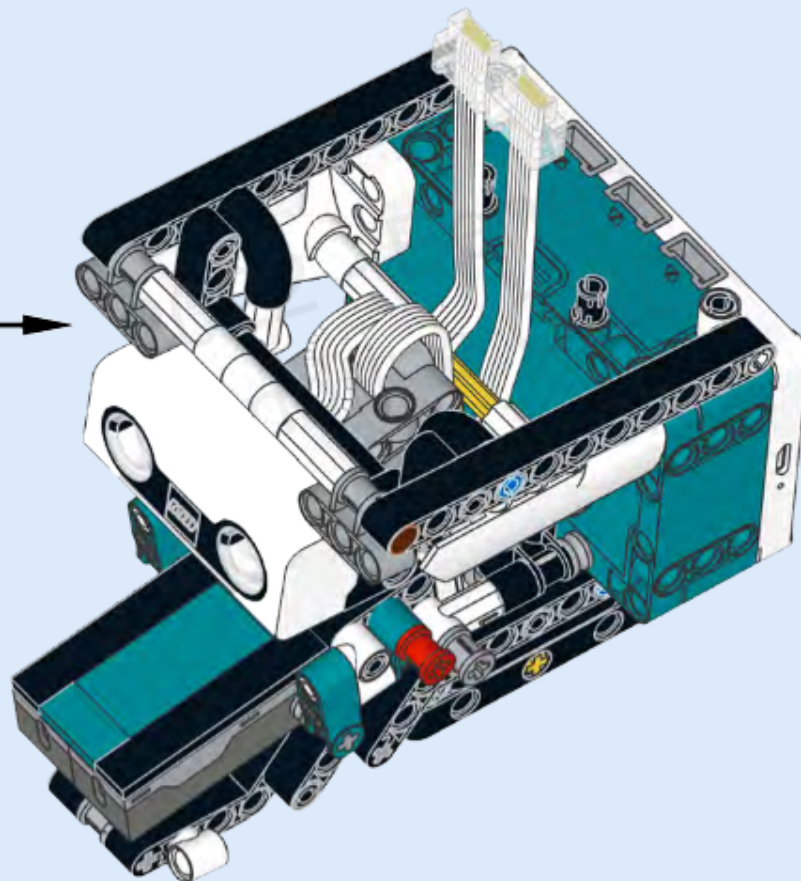
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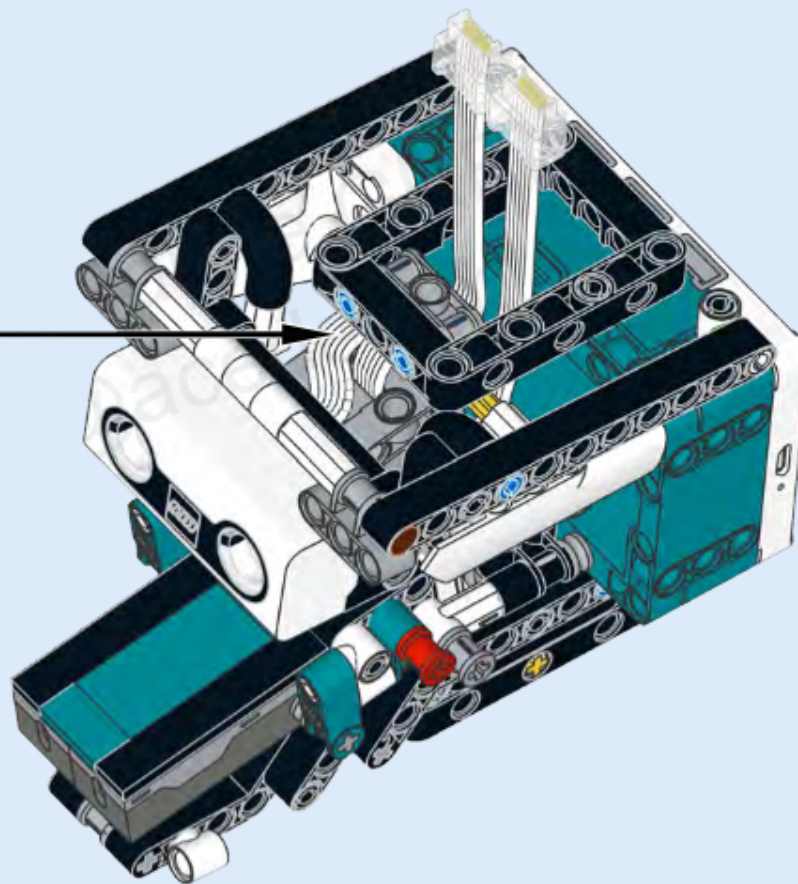
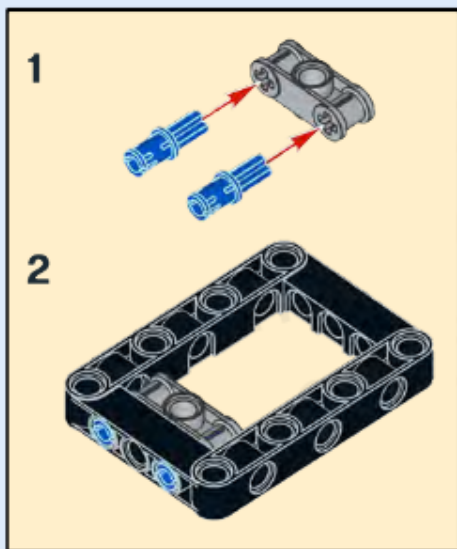
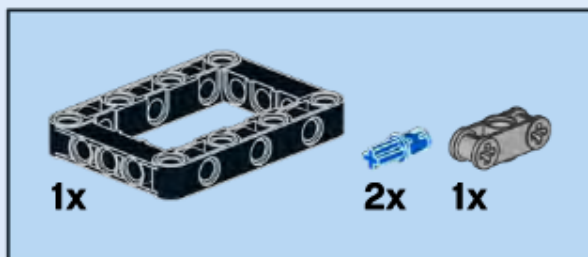
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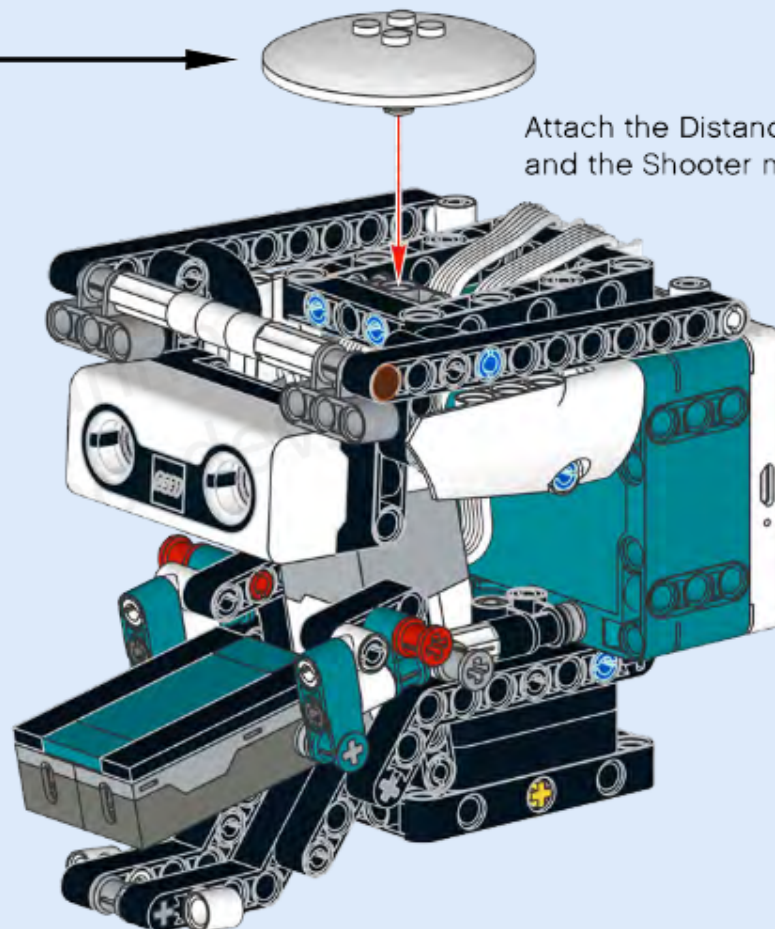
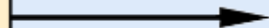
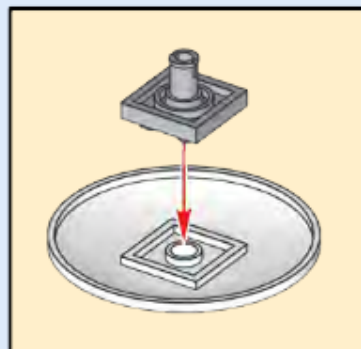
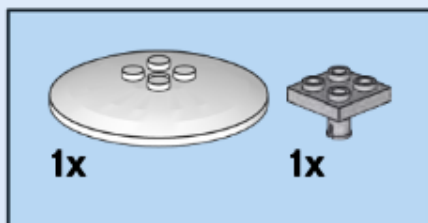
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91

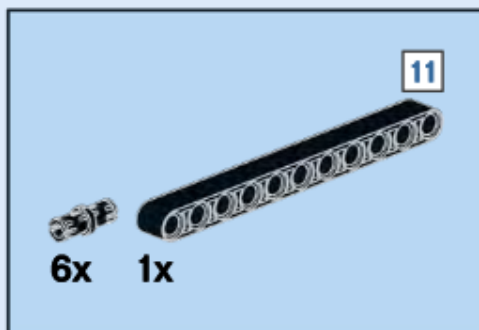


92



Attach the Distance Sensor cable to port F and the Shooter motor cable to port D.

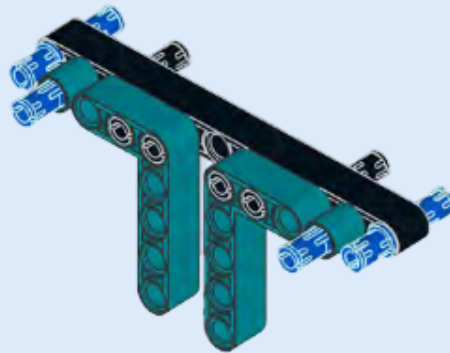
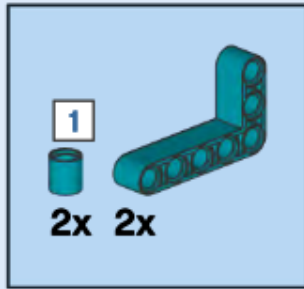
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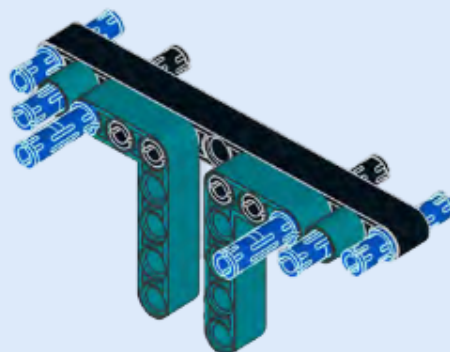
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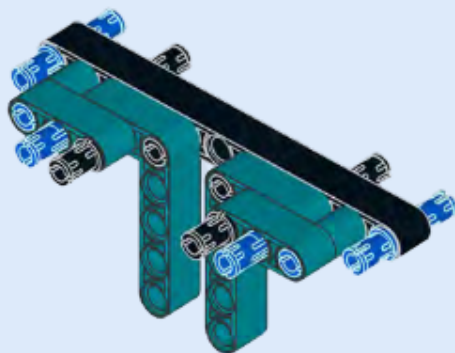
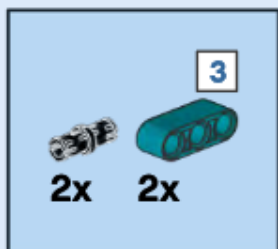
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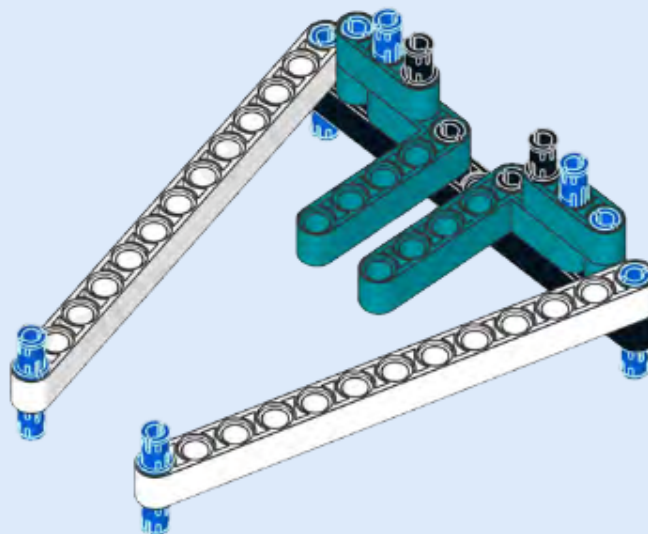
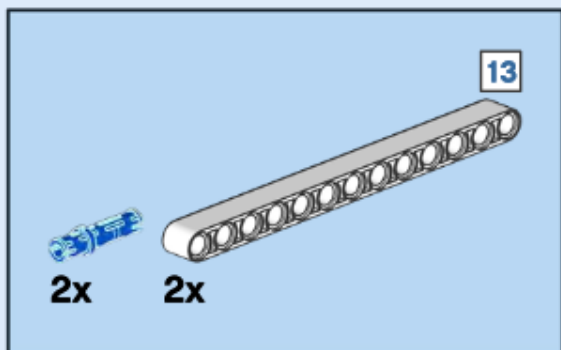
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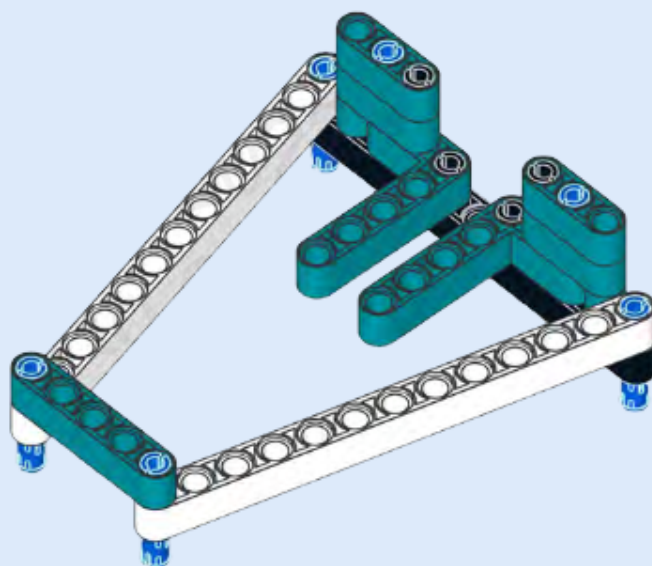
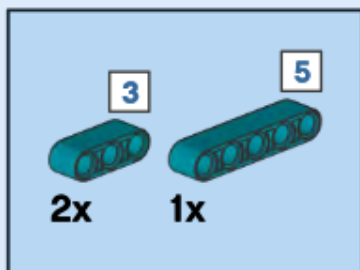
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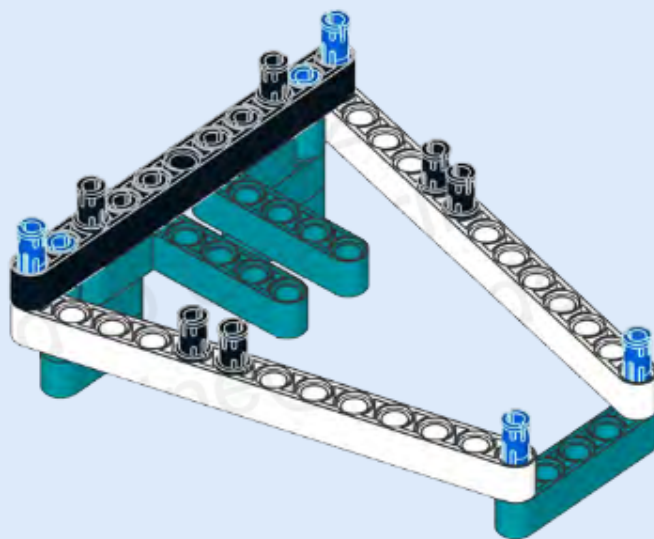
98



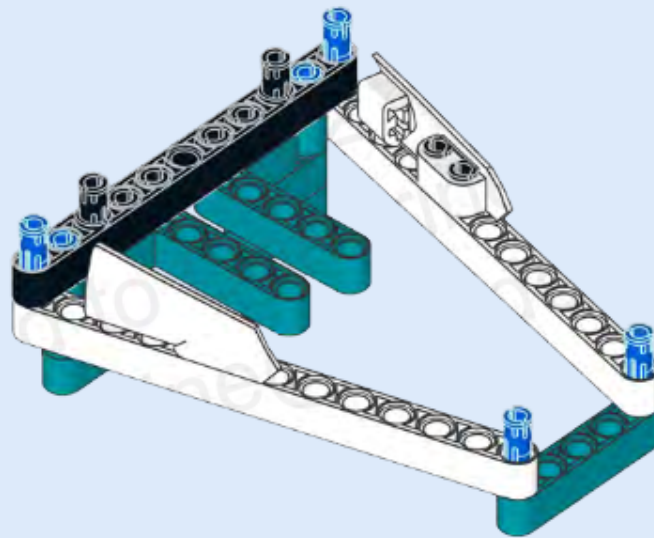
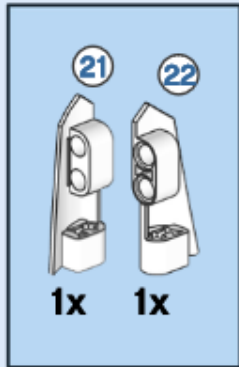
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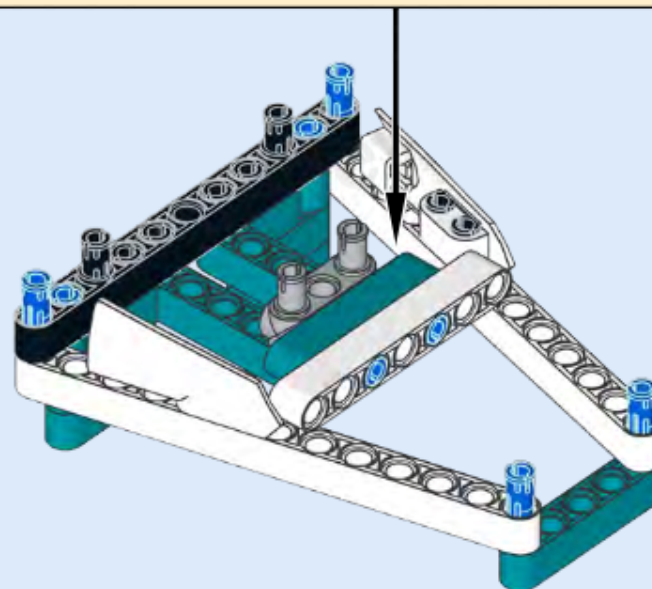
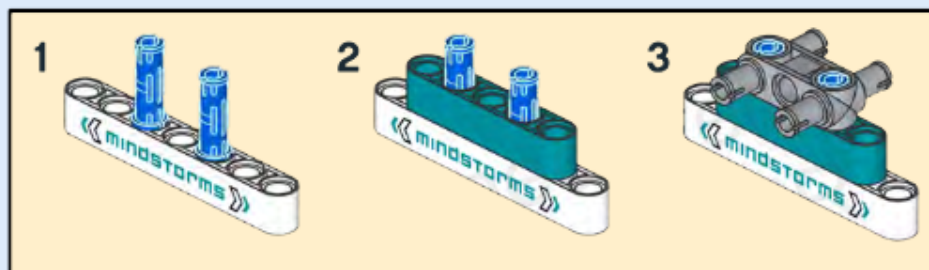
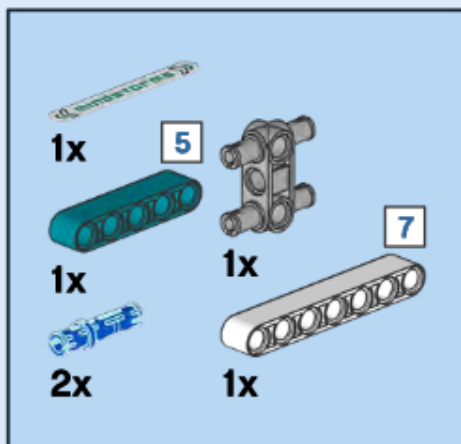
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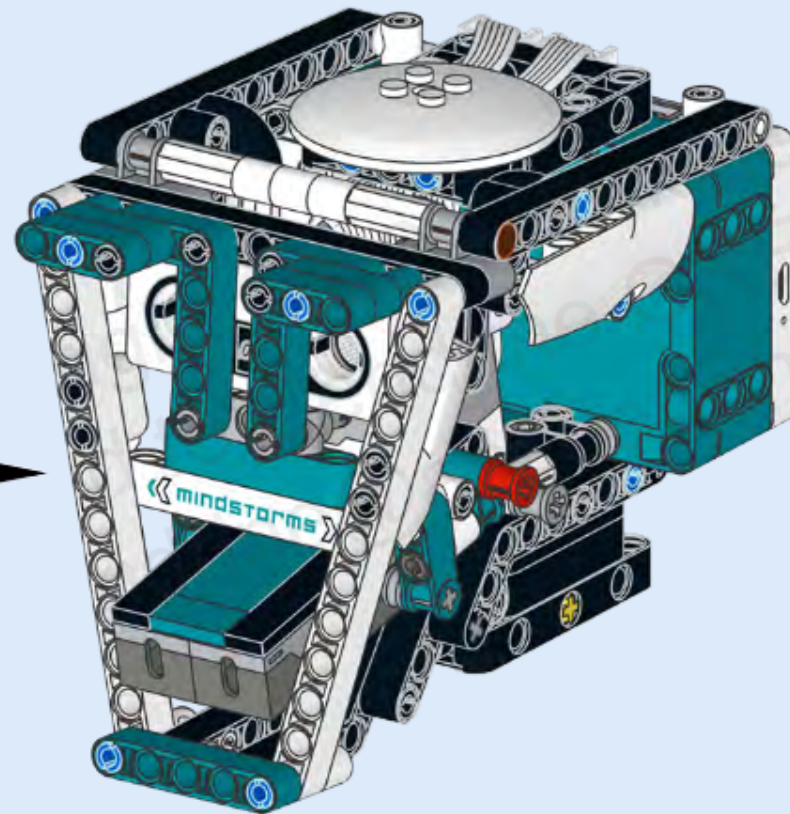
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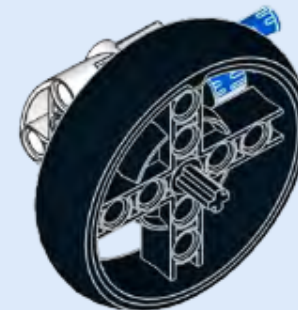
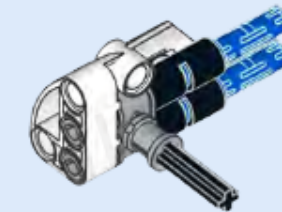
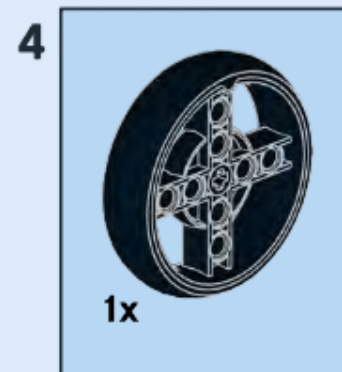
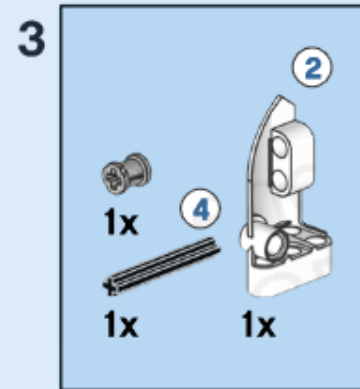
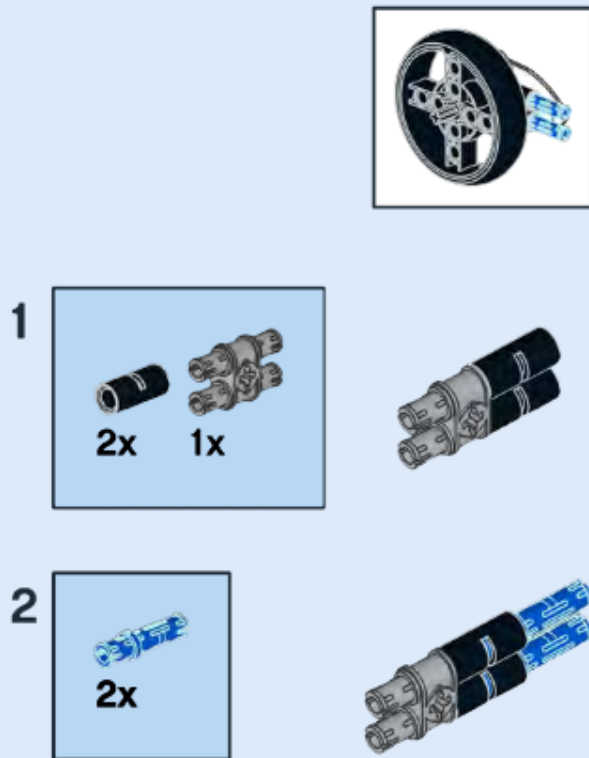


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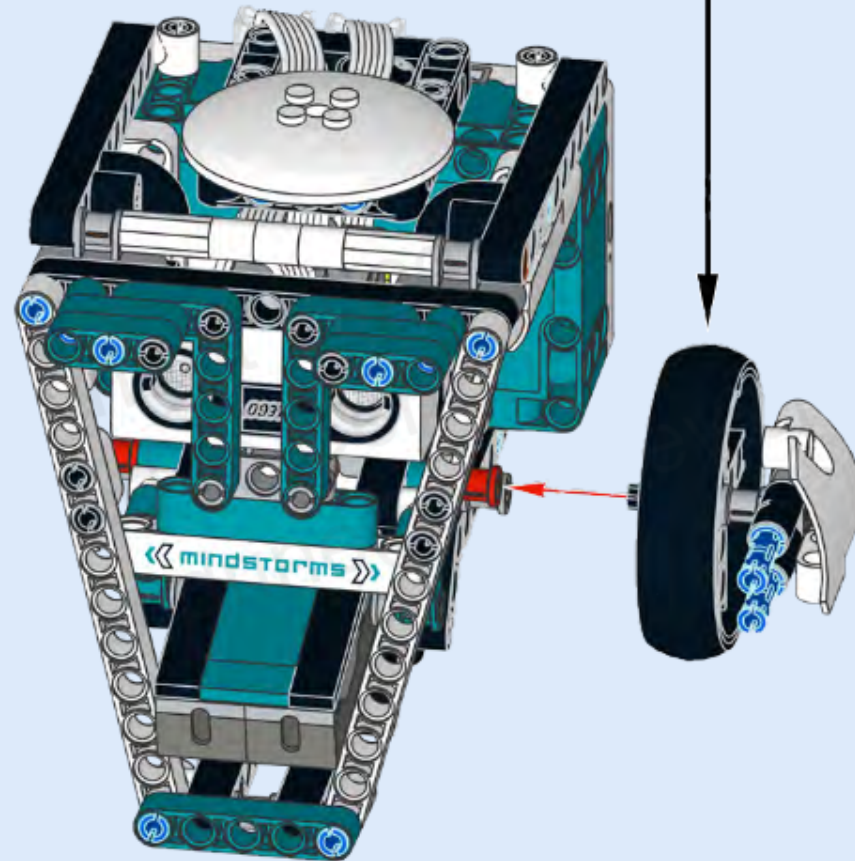


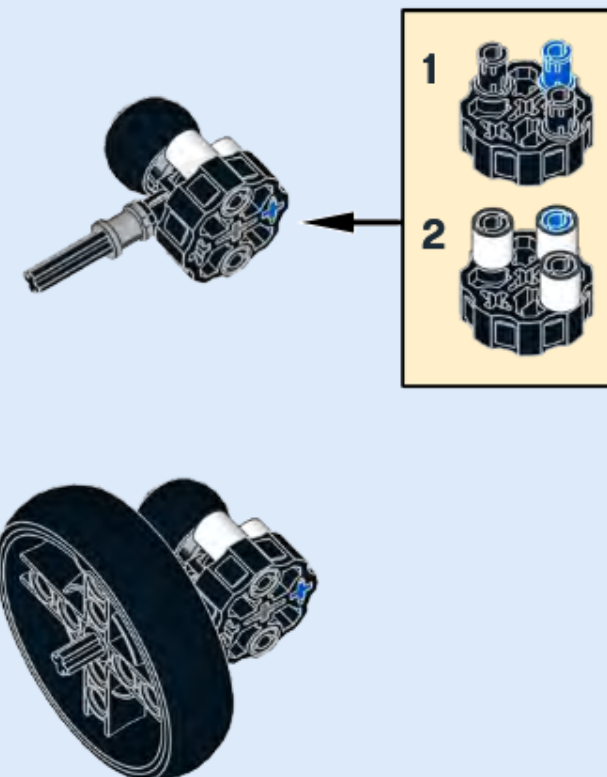
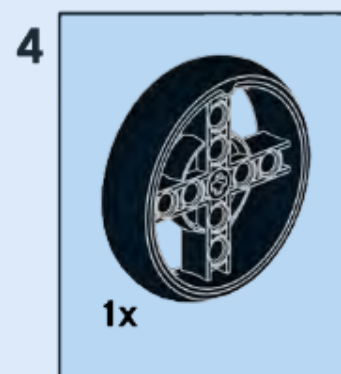
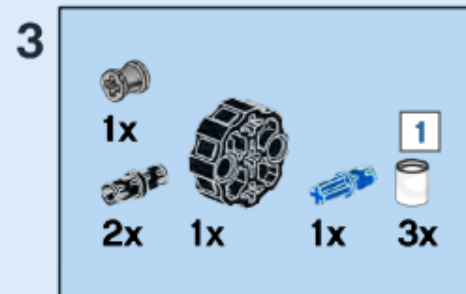
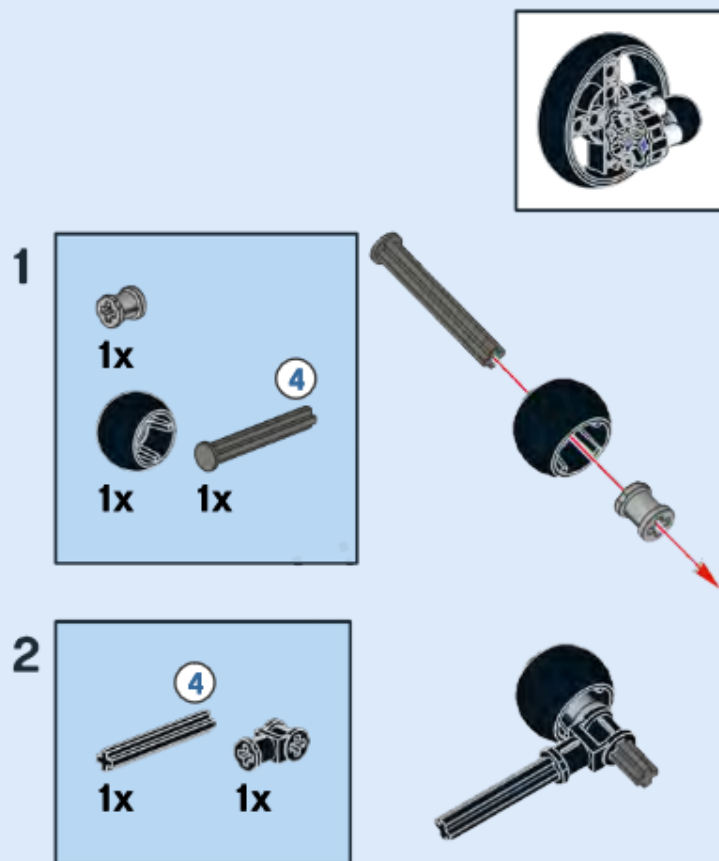
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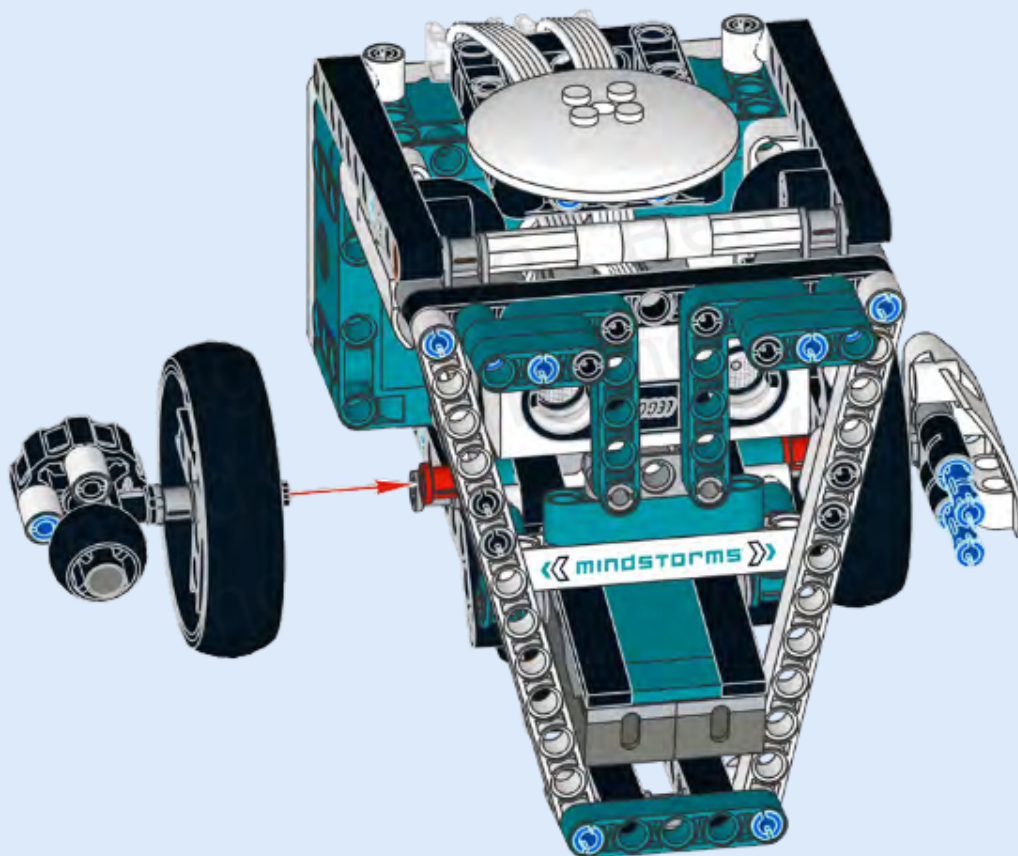


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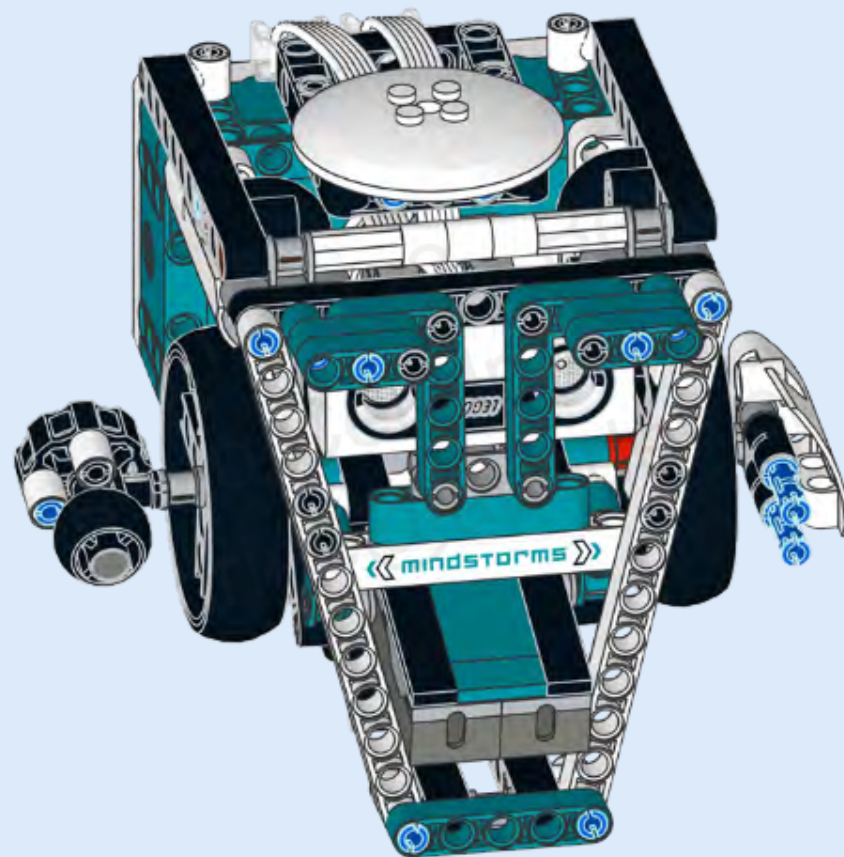




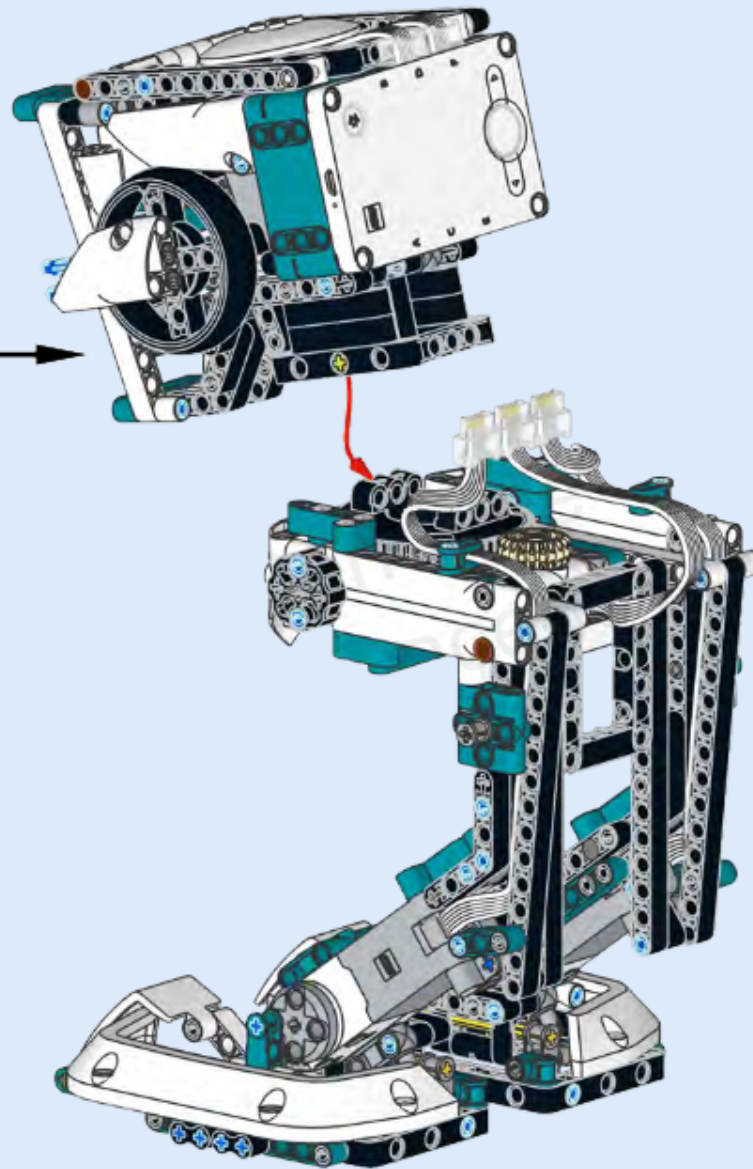
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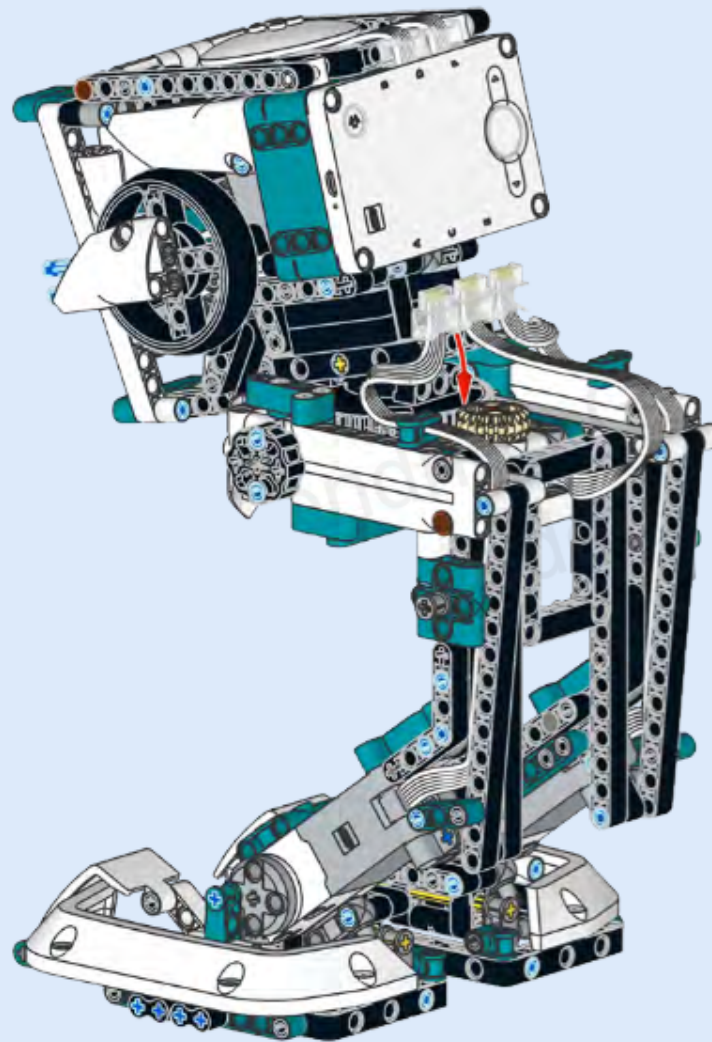
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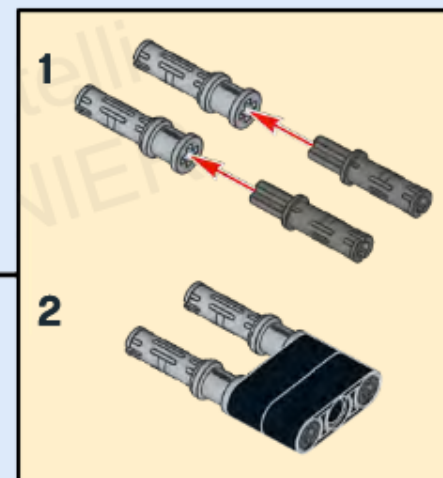
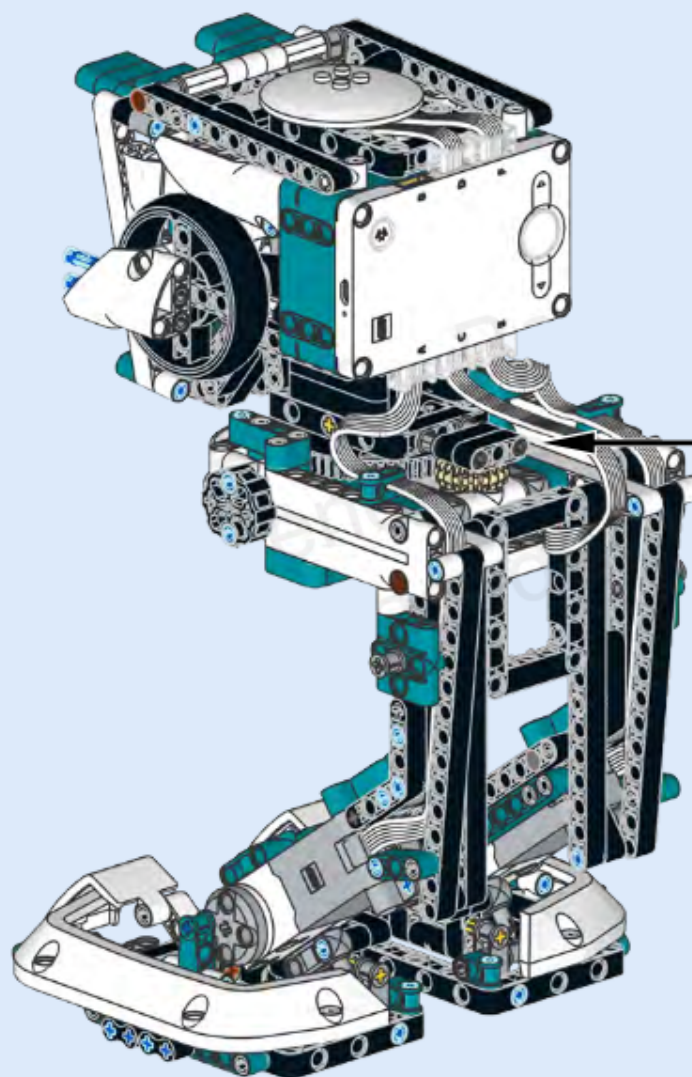
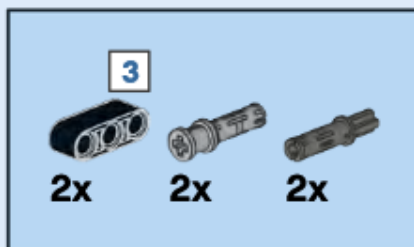
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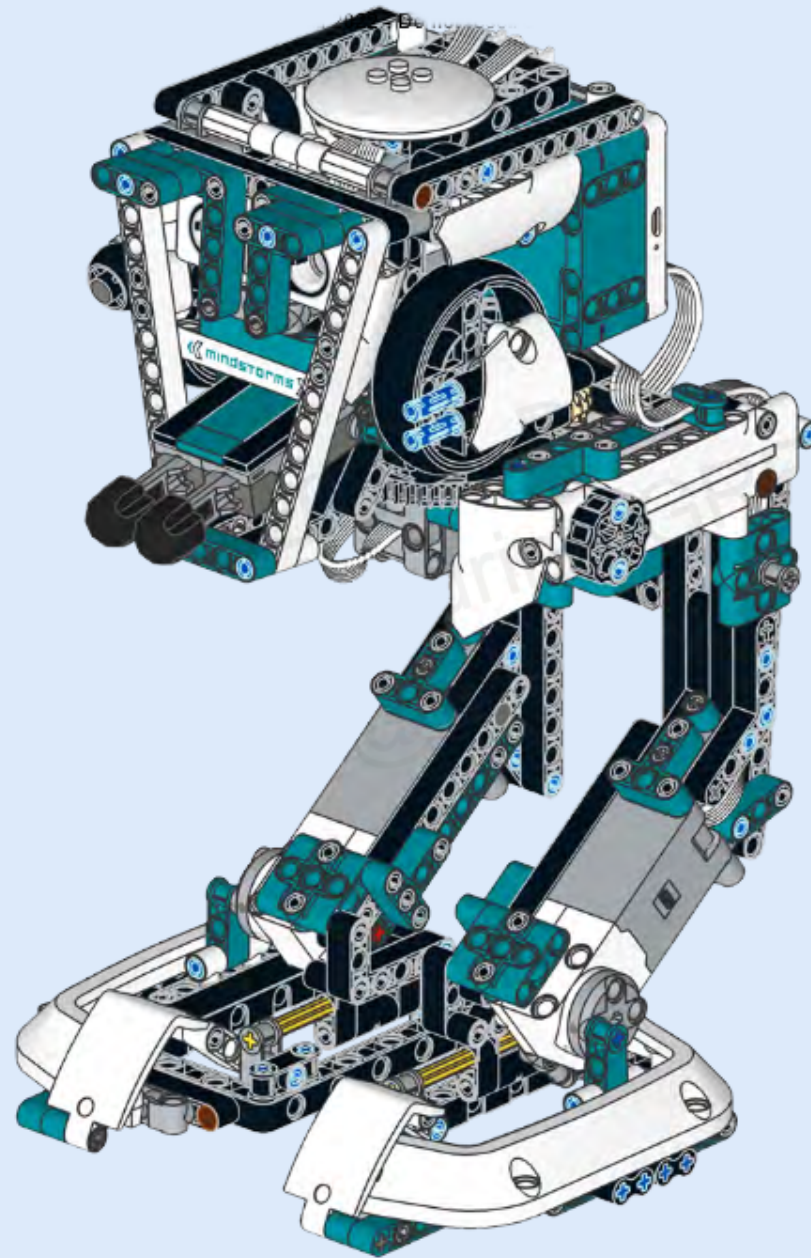
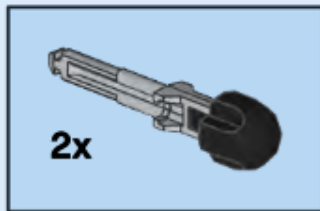
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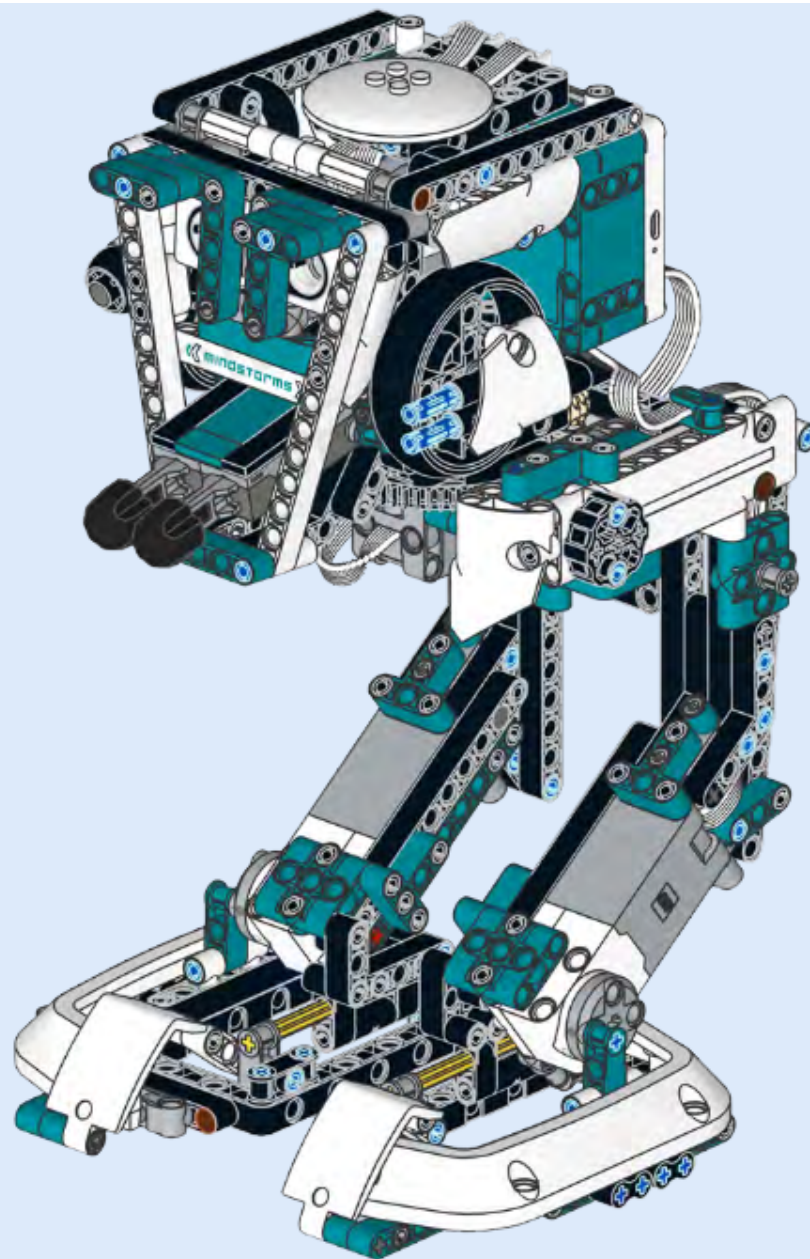
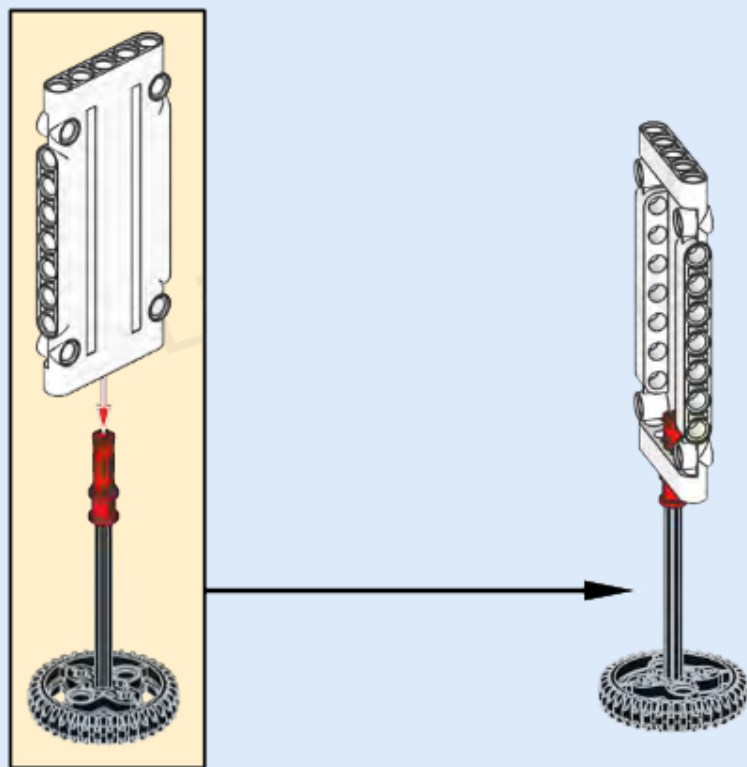
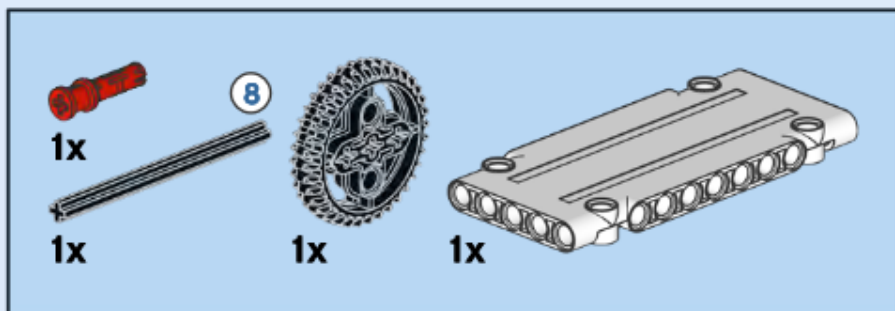
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112



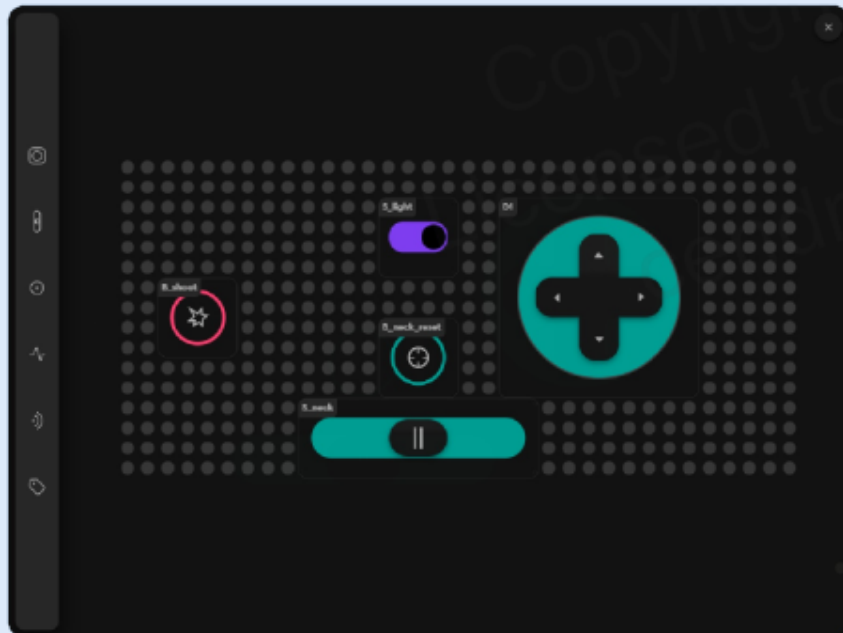
113



AT-ST - RC Program page 1

Variables:

neck
shooting



Walk forward



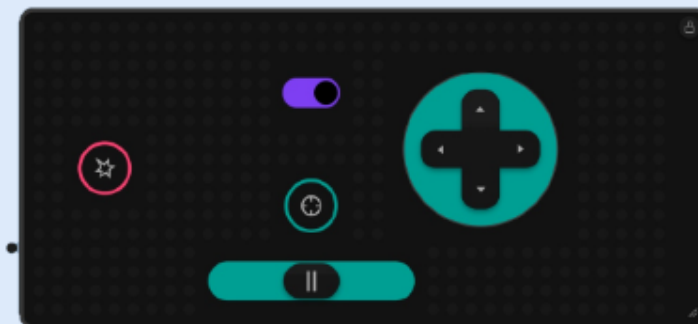
Turn left



Walk backward



Turn right



AT-ST - RC Program page 2



```

when program starts
  set movement acceleration to very slow
  set movement motors to A+E
  set movement speed to 25 %
  A+E set speed to 20 %
  D set speed to 75 %
  C set speed to 60 %
  C go shortest path to position 0
  C set acceleration to very slow
  C set relative position to 0
  broadcast alignFeet and wait

when I receive alignFeet
  A go shortest path to position 220

when I receive alignFeet
  E go shortest path to position 330
  
```

```

when slider S_neck is moved
  set neck to slider S_neck * 1.5
  broadcast moveNeck

when I receive moveNeck
  C go to relative position neck at 60 % speed

when button B_neck_reset is pressed
  if neck > 0 then
    C go counterclockwise to position 0
  else
    C go clockwise to position 0
  
```

```

define shoot
  if shooting = 0 then
    set shooting to 1
    D go shortest path to position 320
    D go shortest path to position 0
  else
    set shooting to 0
    D go shortest path to position 40
    D go shortest path to position 0
  
```

```

when button B_shoot is pressed
  shoot

when switch S_light is toggled on
  F light up

when switch S_light is toggled off
  F light up
  
```

```

define walk straight by steps steps
  A go shortest path to position 45
  E go shortest path to position 145
  move straight: 0 for -.5 * steps rotations

define steer left by steps steps
  A go shortest path to position 210
  E go shortest path to position 310
  move left: -100 for .5 * steps rotations
  
```

You can use these My Blocks in your programs to make the AT-ST walk and steer.

```

define steer right by steps steps
  A go shortest path to position 45
  E go shortest path to position 145
  move right: 100 for .5 * steps rotations
  
```