



# 水力補充包

## HYDRAULICS KIT

FUN LAB



# 1266

21 PCS

7+

知識來自於經驗

KNOWLEDGE COMES

FROM EXPERIENCE ALONE



20 MODELS TO BUILD

$(x) = \frac{d}{3}$ ,  $x\sqrt{x}$

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各位小朋友，歡迎您加入 Gigo 智高的 FUN LAB 積木實驗室。  
 在 FUN LAB – #1266 水力補充包當中，我們添加了更多的趣味零件，透過與 #1261 科學探索組的相互結合，就能延伸出更多的創意。  
 在我們動手組裝的過程當中，不僅能體驗創作的樂趣，更能學習到各種有趣的知識！讓我們將這些知識活用於日常生活吧！  
 那麼，就讓我們一起探索、學習 FUN LAB 積木實驗室吧！

Hello, everyone! Welcome to join Gigo's Fun Lab.

In the package of #1266 Hydraulics Kit, a Fun Lab accessories and add-ons, some extra fun parts are included. Working together with Kit #1261 Scientific Tour more creative ideas can be inspired.

During the process of assembly, we will experience the fun of creation and learn various interesting knowledge, which can hopefully be utilized in our everyday life.

Let's work together to explore Gigo's Fun Lab.

## #1266 水力補充包 零件表
























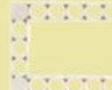








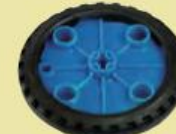








## #1266 Hydraulics Kit parts :



42 B- 扳手 B-PEG REMOVER x1	43 C- 水動齒輪盒 C-AIR-WATER POWER PACK x1	44 C- 儲水筒 C-RECYCLED WATER STORAGE x1	45 C- 寶特瓶含蓋 C-BUOYANCY BOTTLE WITH LID X1	46 C- 打氣筒 C-SECURED PUMP x1	47 C- 輪船螺旋槳 C-PADDLE WHEEL x1	48 C- 寶特瓶結合器 C-8 PIN ROUND FRAME FOR BOTTLE x2
49 C- 氣壓水動瓶座 C-SECURED AIR- WATER STORAGE X1	50 C- 噴嘴底座 C-STORAGE CAP x1	51 C-2000mm 粗水管 C-2000mm TUBE A x1	52 C- 鎖管螺母 L C-L SECURITY NUT X2	53 C- 鎖管螺母 S C-S SECURITY NUT x2	54 C- 噴嘴 C-NOZZLE A x1	55 C- 釋壓座 C-CAR LAUNCHER x1
56 C- 萬用噴嘴 C-NOZZLE B x1	57 C 單向止水閥 C-SECURED ONE- WAY SWITCH X1	58 C-1200mm 細水管 C-1200mm TUBE B x1	59 C- 空氣壓縮瓶 O 形環 C-OD15.8 FLAT O-RING x1			

## #1261 科學探索組 需用零件表

## Parts Needed from Kit #1261 Scientific Tour

 1 C-軸扣鍵 C-AXLE CONNECTOR x1	 2 C-自轉軸鍵 C-AXLE x2	 3 C-凸輪連結鍵 C-CAM CONNECTOR x2	 4 C-長結合鍵 C-LONG PEG x10	 5 C-軸固定鍵 C-AXLE FIXING x2	 6 C-底座結合器 C-BASE GRID CONNECTOR x2	 7 C-軸轉接器 C-ROD CONNECTOR x1	 8 C-關節鍵 C-HINGE x4
 9 C-單向轉接鍵 C-FRONT CONVERTER x4	 10 C-二合一結合鍵 C-TWO-IN-ONE CONVERTER x2	 11 B-短結合鍵 B-SHORT PEG x10	 12 C-3孔1/4弧長條 C-BENDED ROD x6	 13 C-3孔超長條 C-3 HOLE DUAL ROD x3	 14 C-3孔長條 C-3 HOLE ROD x1	 15 C-3孔長條側有孔 C-3 HOLE ROD FRONT CLOSED x1	
 16 C-5孔超長條 C-5 HOLE DUAL ROD x3	 17 C-5孔長條 C-5 HOLE ROD x3	 18 5孔長條側有孔 C-5 HOLE ROD FRONT CLOSED x1	 19 C-11孔長條 C-11 HOLE ROD x5	 20 C-15孔超長條 C-15 HOLE DUAL ROD x3	 21 C-10T鍊輪 C-10T CHAIN GEAR x1		
 22 C-20T鍊輪 C-20T CHAIN GEAR x1	 23 C-5x5孔正方框 C-5X5 FRAME x4	 24 C-5x10孔長方框 C-5X10 FRAME x4	 25 C-5x13孔超長方框 C-5X13 DUAL FRAME x1	 26 C-5x15孔正方框 C-5X15 FRAME x4			
 27 C-20T齒輪 C-20T GEAR x2	 28 C-40T齒輪 C-40T GEAR x2	 29 C-60T齒輪 C-60T GEAR x2	 30 C-OD33mm滑輪 C-OD33 PULLEY x1	 31 C-OD53mm滑輪 C-OD53 PULLEY x2	 32 C-渦桿 C-WORM GEAR x1	 33 C-OD70x12mm橡膠輪 C-RACING TIRE x2	
 34 C-100mm橡皮筋 C-100mm RUBBER BAND x2	 35 C-OD56mm橡膠圈 C-OD56 O-RING x2	 36 C-70mm II軸 C-70mm AXLE II x2	 37 C-100mm II軸 C-100mm AXLE II x1	 38 C-150mm I軸 C-150mm AXLE I x1			
 39 C-鍊條 C-CHAIN x48	 40 C-蝸形凸輪 C-SNAIL CAM x1	 41 C-8x12底座 C-BASE GRID x2					

小提醒：課程開始前，請先搭配 #1266 水力補充包說明書，將 #1261 科學探索組需要的材料挑出，會更方便進行模型創作喔！

Reminders: Before the class, please read the instructions of #1266 Hydraulics Kit to pick out parts needed from #1261 Scientific Tour to make model assembly easier.

# 組裝小技巧

Tips and Tricks

課前水管需要剪裁的長度為：

1200mm 細水管：150mmx1, 300mmx2

2000mm 粗水管：100mmx2, 300mmx3, 600mmx1

Before the lesson, please cut tube B into 100mmx2, 300mmx3, 600mmx1. Cut tube A into 150mmx1, 300mmx2, and keep the rest.

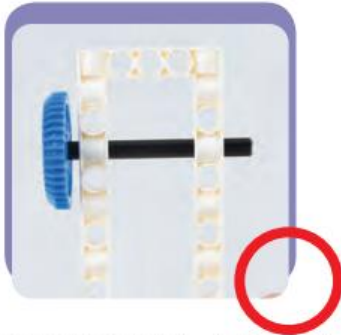
## 扳手使用：自轉軸

Remover Usage : Axle



## 扳手使用：結合鍵

Remover Usage : Peg



傳動零件與框架有空隙 – 正確  
With Gap ( Correct-Works Smoothly)



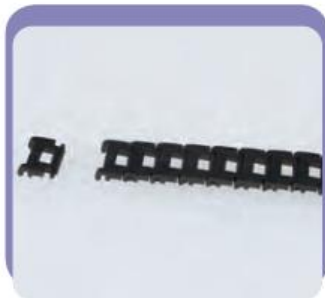
傳動零件與框架無空隙 – 錯誤  
Without Gap ( Wrong-Works Badly )



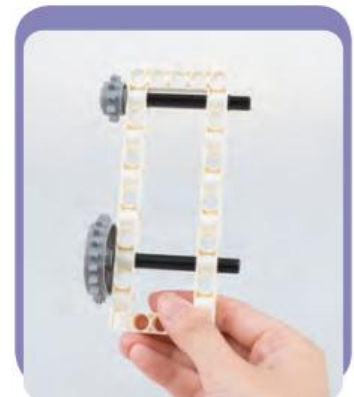
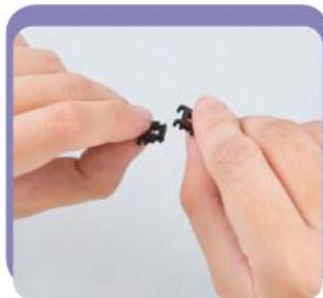
軸固定鍵用法  
Axle Fixing is used to keep gears and axles from slipping

## 鍊條組裝方式 1

Connecting Chain segments ( 1 )-same surface



## 鍊條組裝方式 2



鏈輪配置需平行  
Chain Gears should be parallel



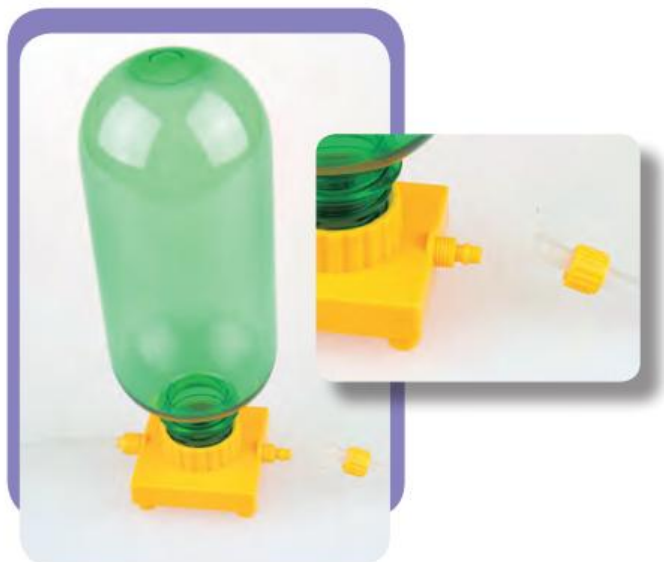
鍊條組裝成品須有垂墜感，  
可加減一個鍊條去做調整  
Gear Chain ( Correct )

## 水管組裝技巧

Tube Assembly skills



管子不可壓折  
Do not bend the tube



粗水管搭配鎖管螺母 L，細水管搭配鎖管螺母 S  
Tube A goes with the L Security Nut. Tube B goes with the S Security Nut.

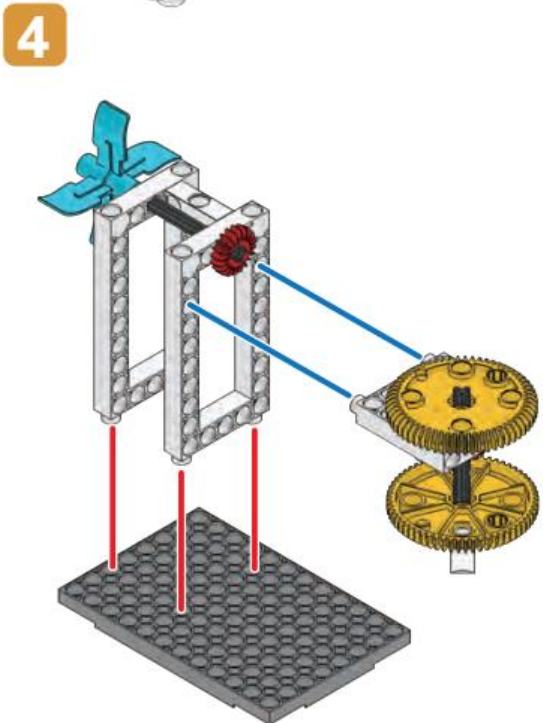
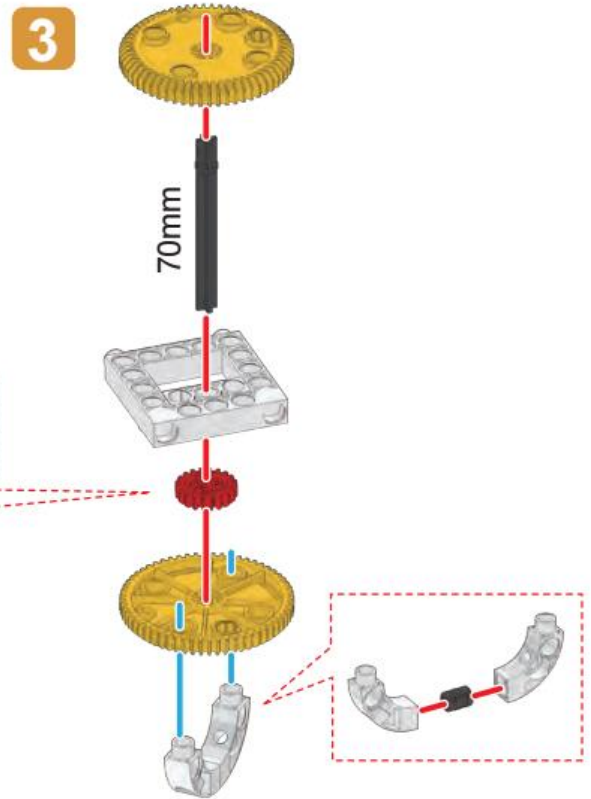
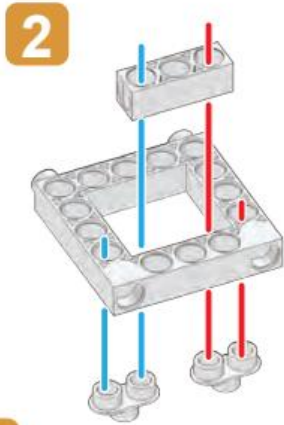
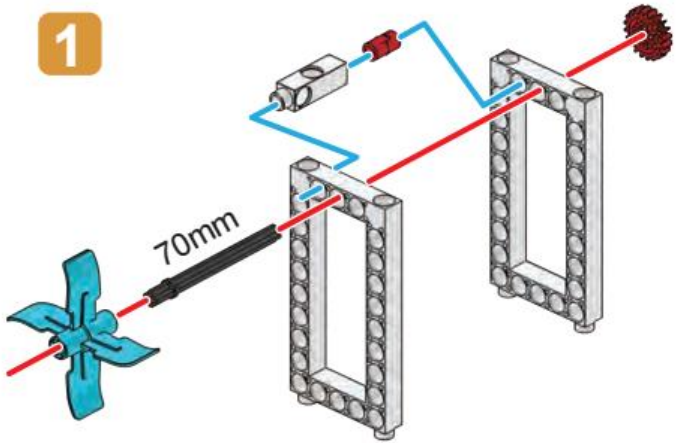
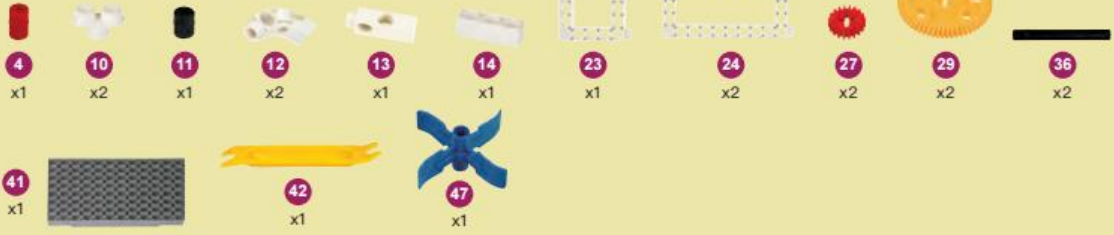


"A" 為進水孔，"B" 為出水孔  
"A" is the entrance and "B" is the exit.



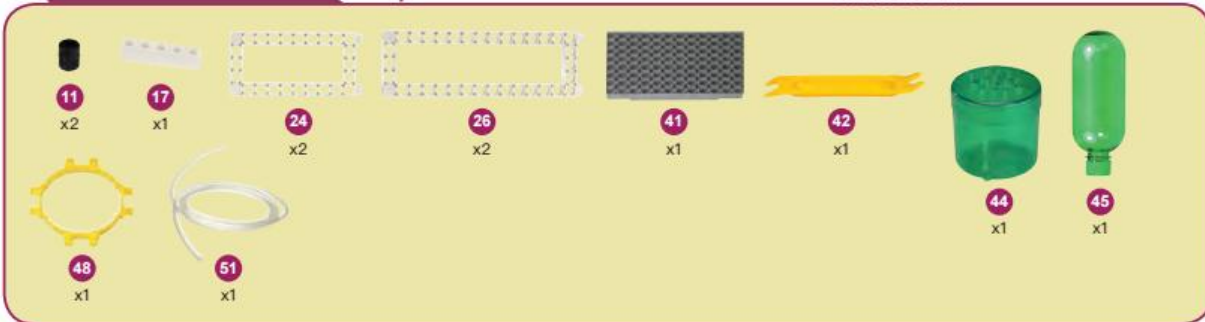
管子與接頭請確實連結到底，將螺帽確實轉到底  
Please attach the Tube to the connectors to the end. Make sure that the Security Nut is tightened.



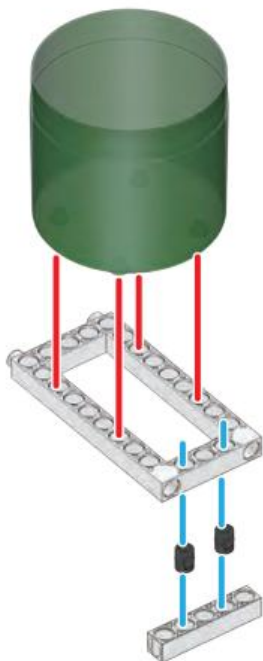


完成  
Done

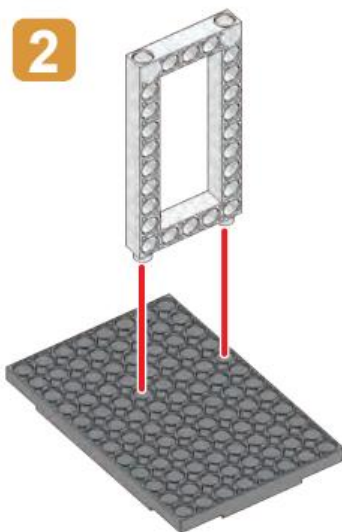




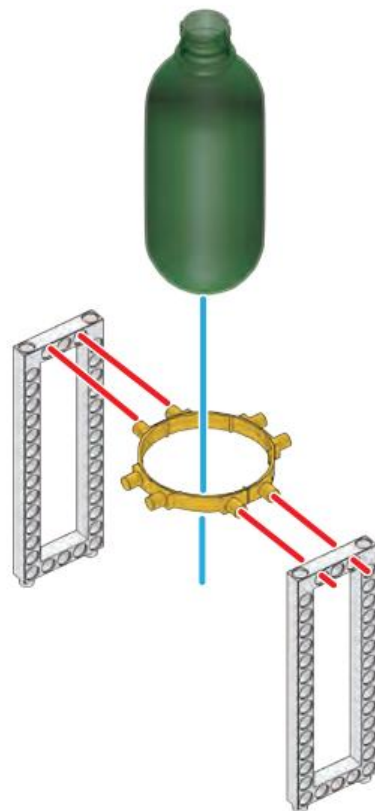
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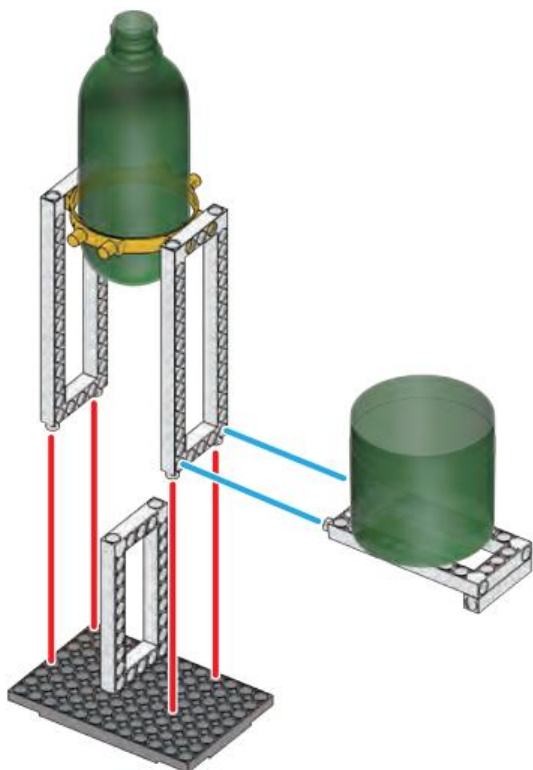
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3



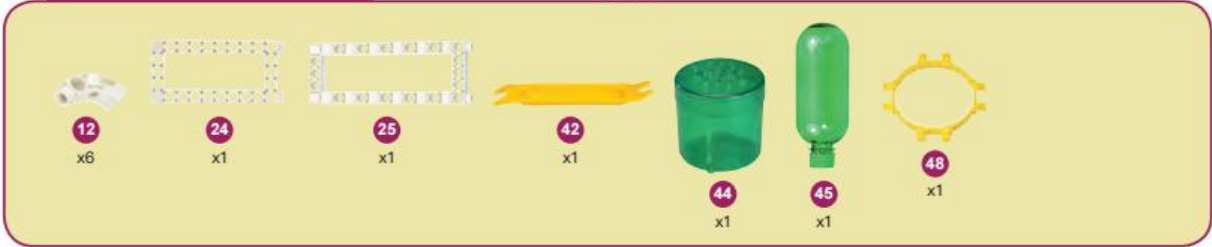
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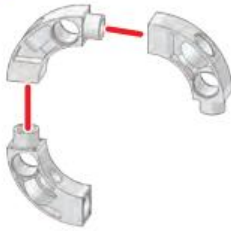
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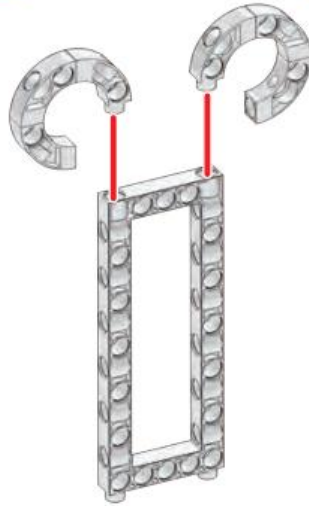




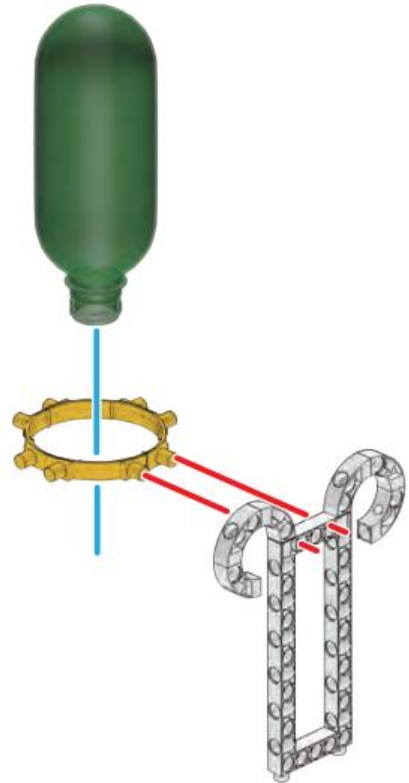
1 x2



2



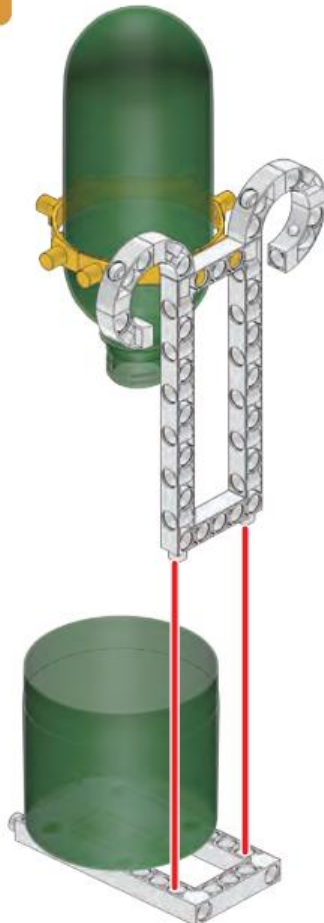
3



4



5



完成  
Done



## 抽水機

## Pump

## 需用零件 Parts Needed

4	17	23	26	41	42	46	51	52	56
x4	x1	x3	x2	x1	x1	x1	x1	x1	x1

**1**

**2**

**3**

**4**

**5**

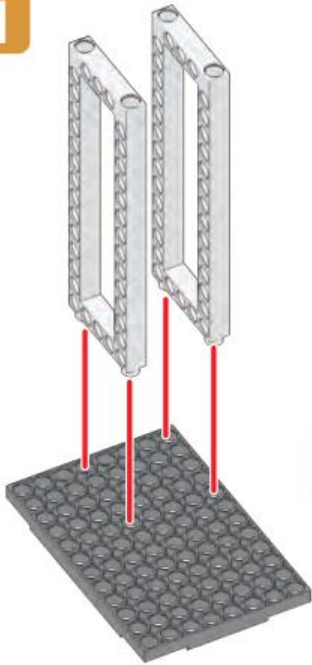
TUBE A 300mm

**完成 Done**

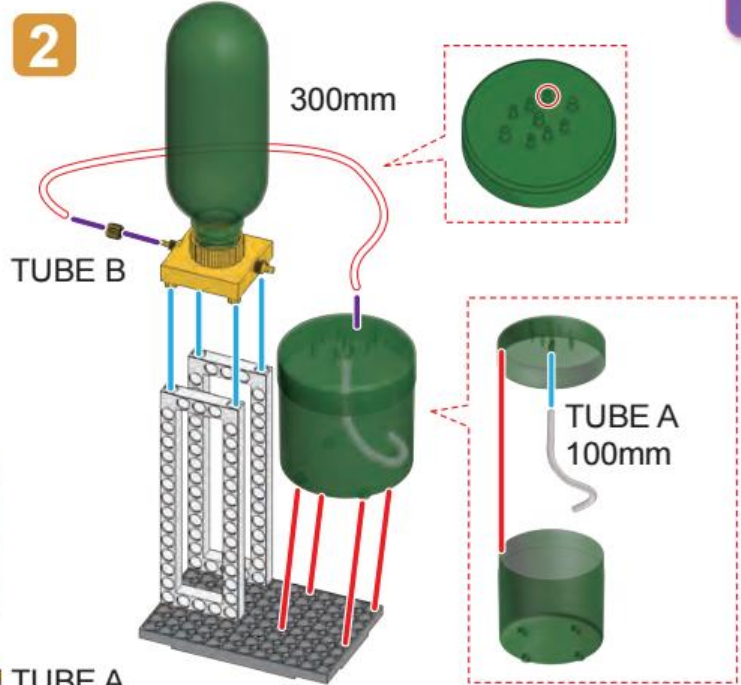
TUBE A 600mm



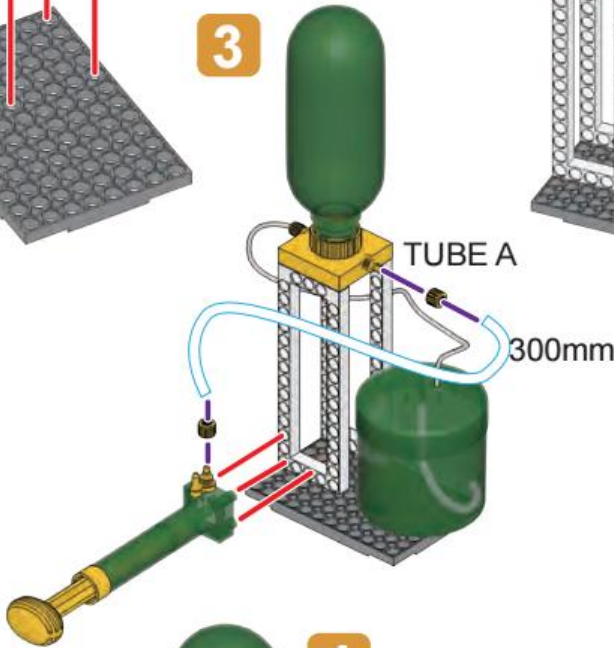
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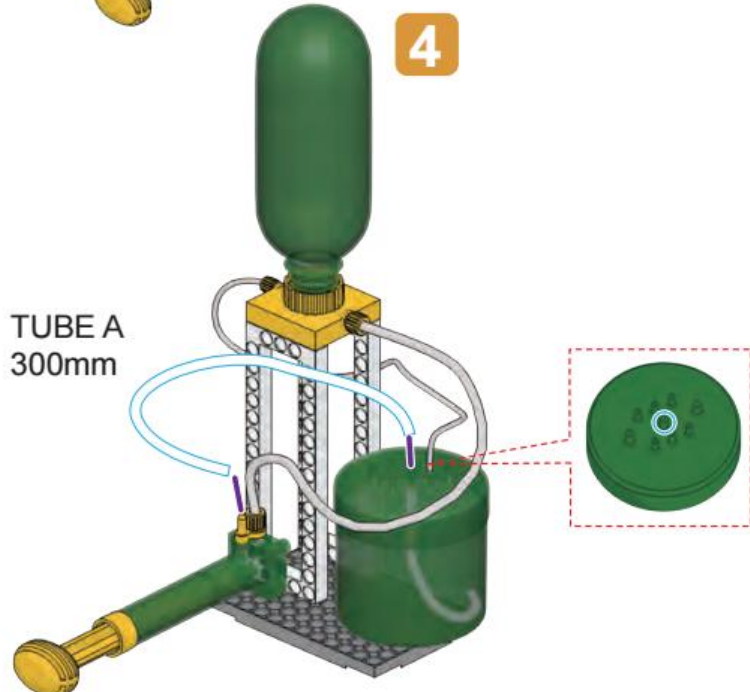
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3



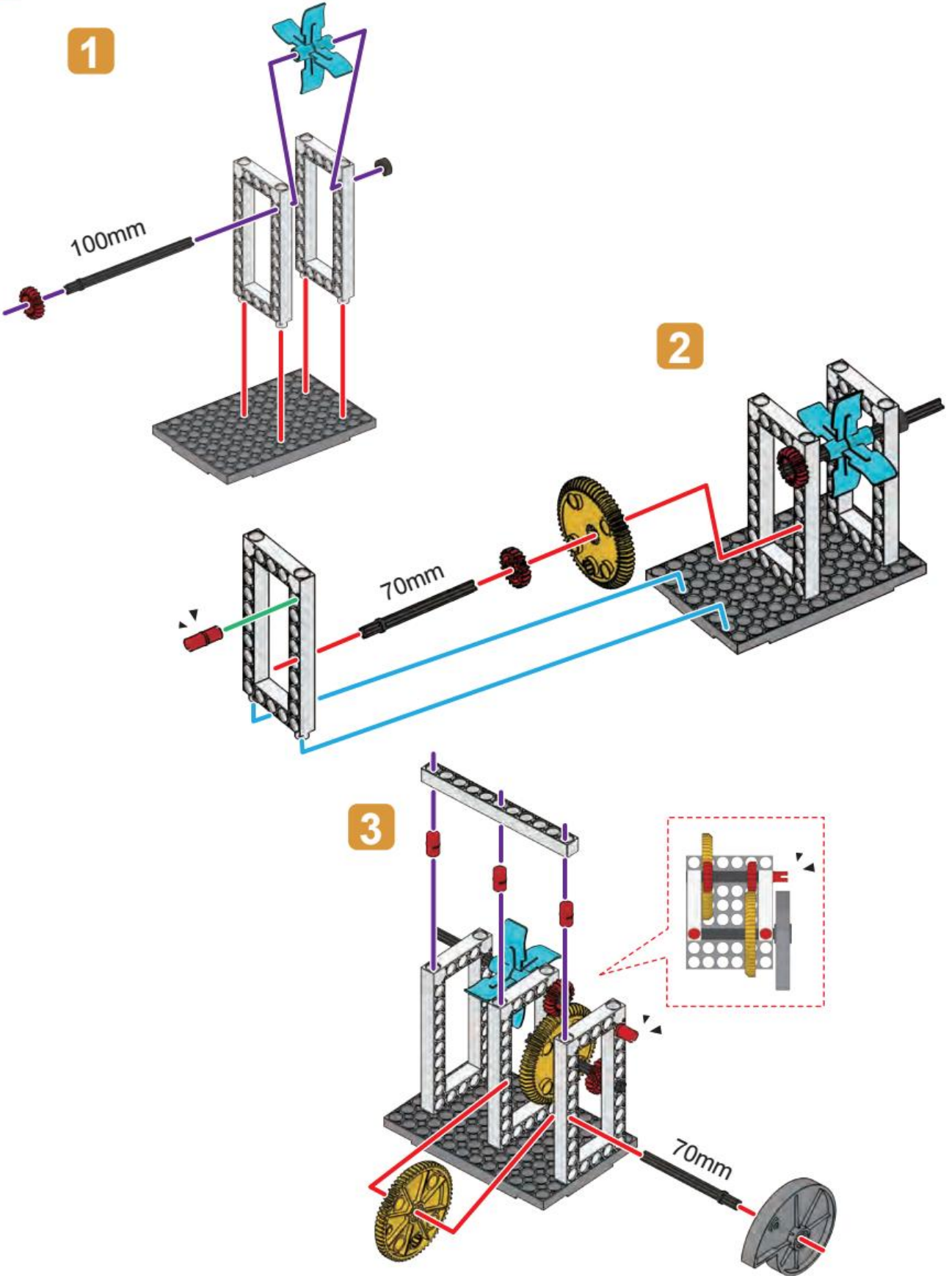
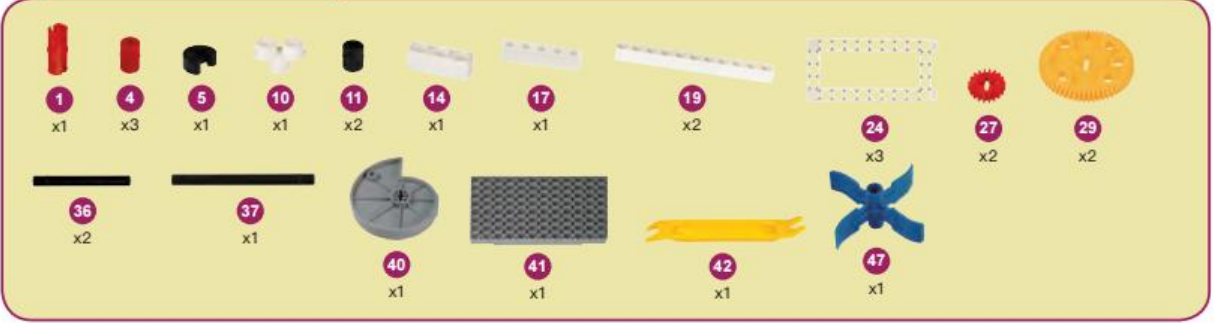
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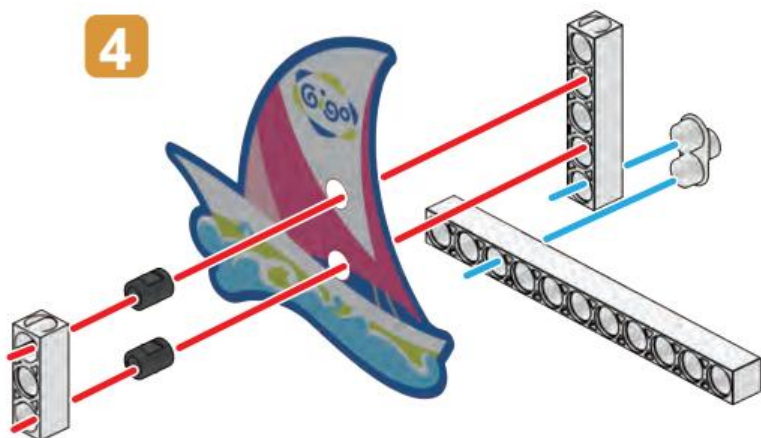
## 乘風破浪

## Waves Machine

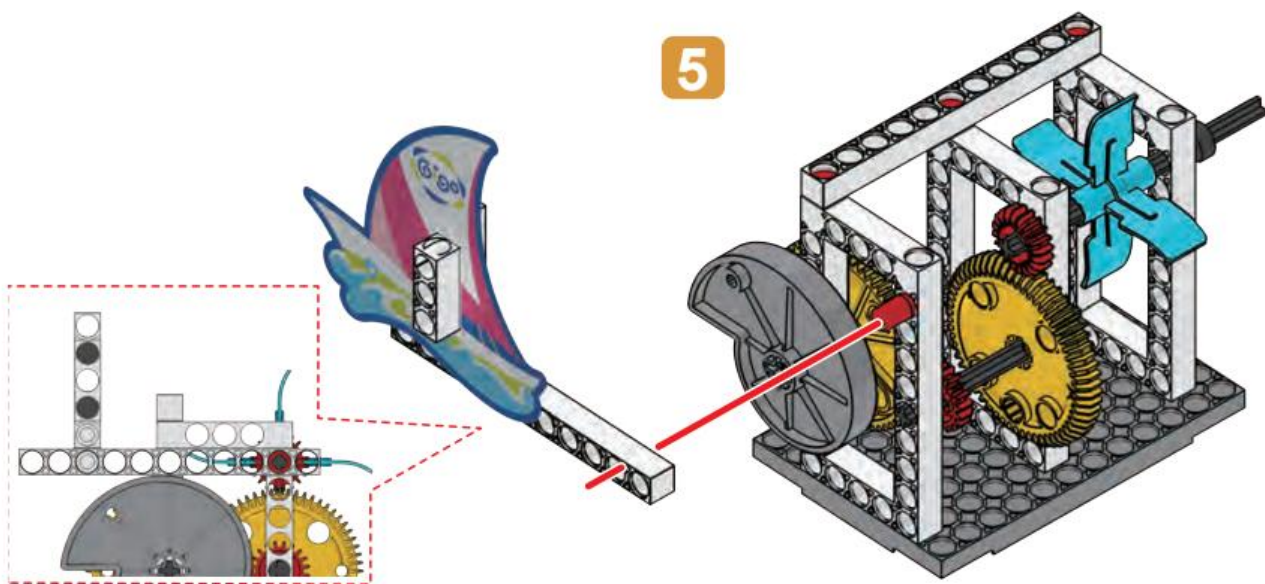
## 需用零件 Parts Needed



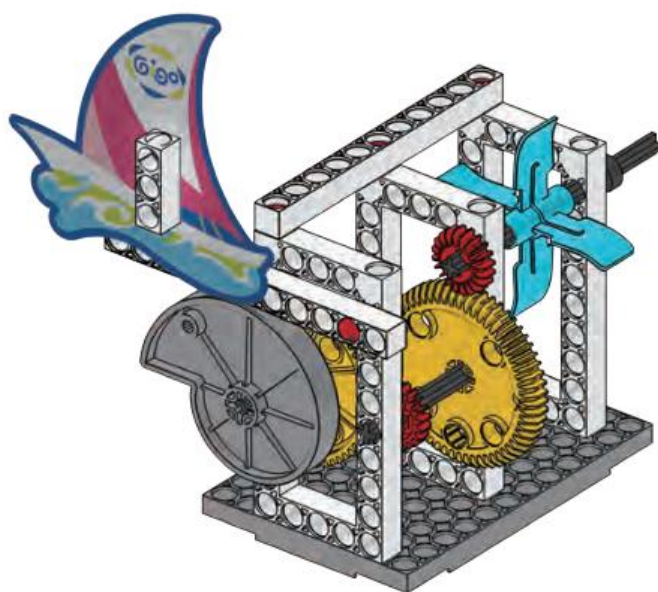
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





5

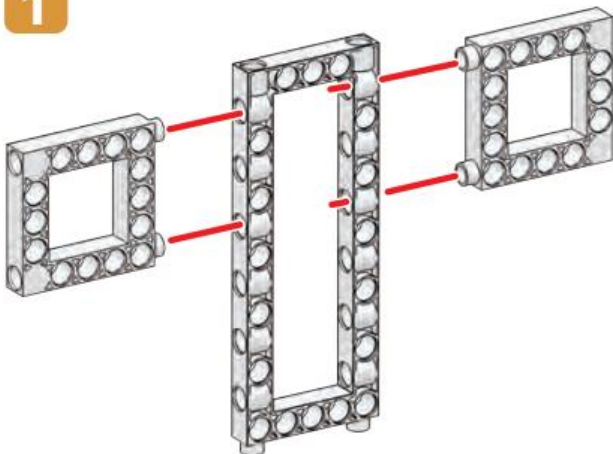


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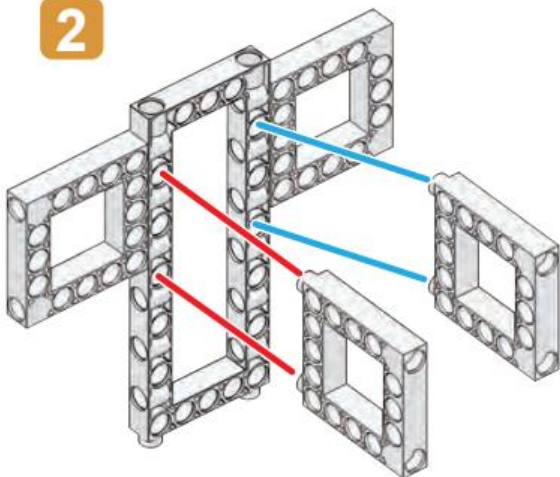


 3 x2	 4 x4	 11 x3	 12 x2	 13 x3	 14 x1	 16 x3	 19 x2	 23 x4	 25 x1
 28 x2	 29 x1	 37 x1	 42 x1	 47 x1					

1



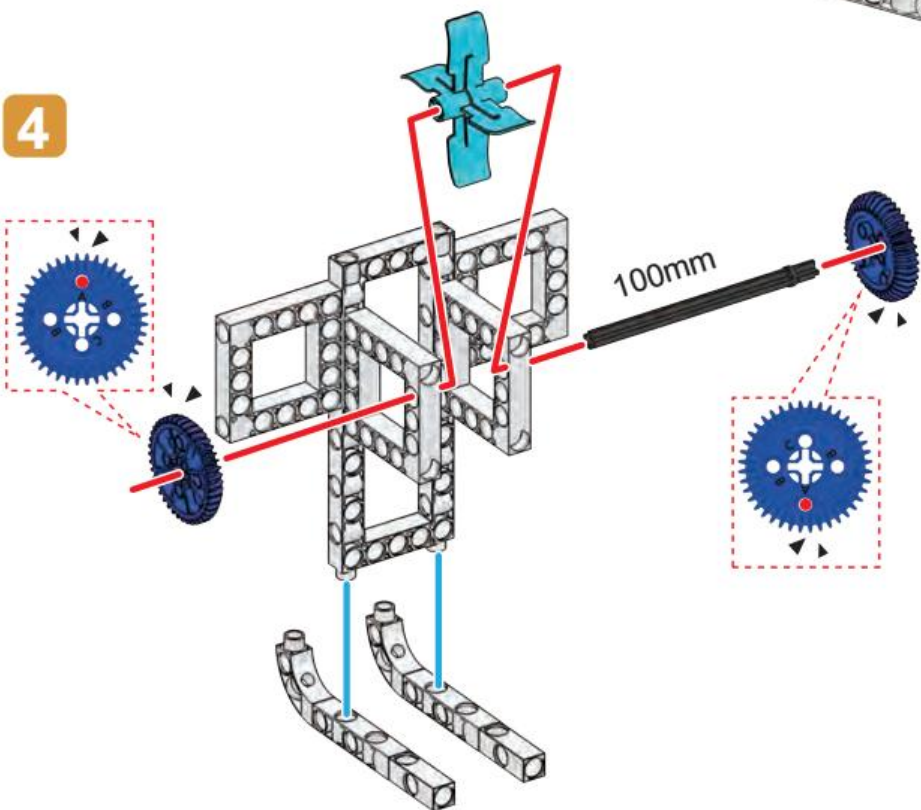
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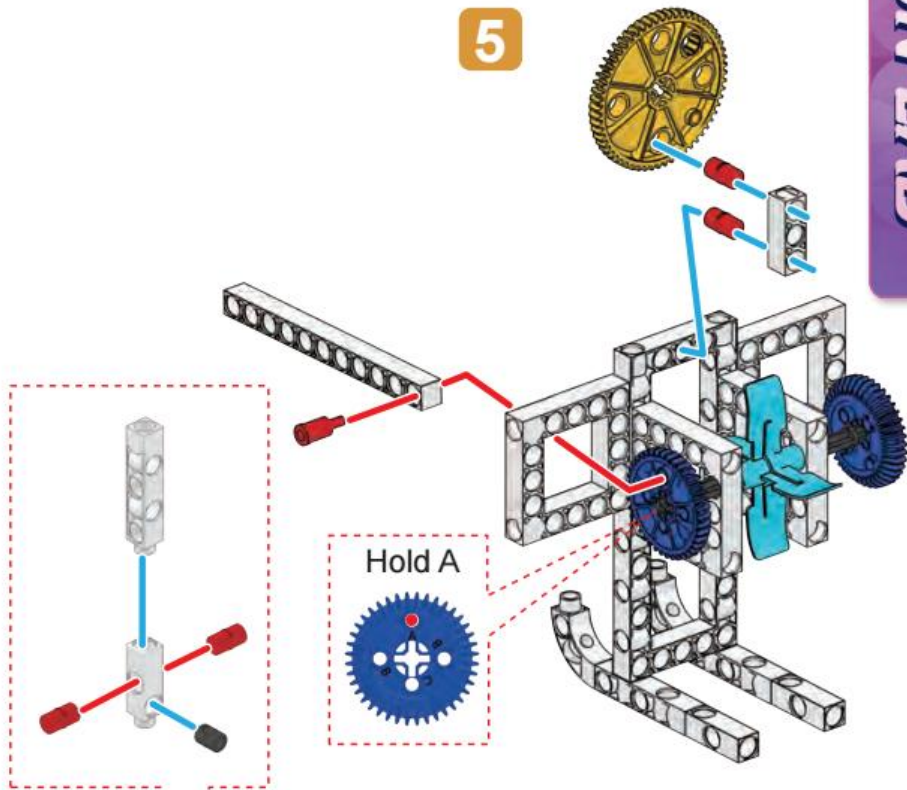
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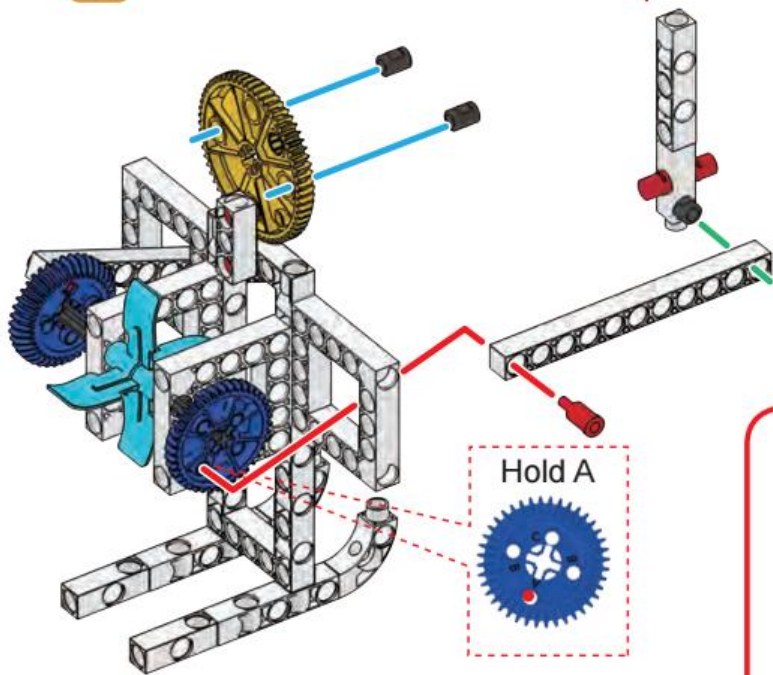
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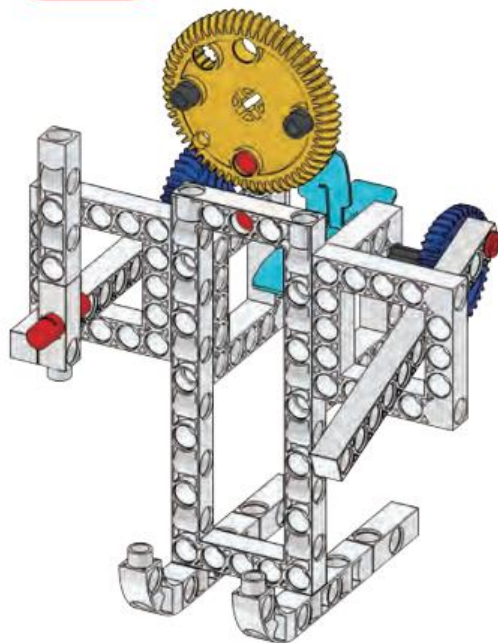
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6





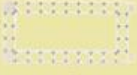






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Done



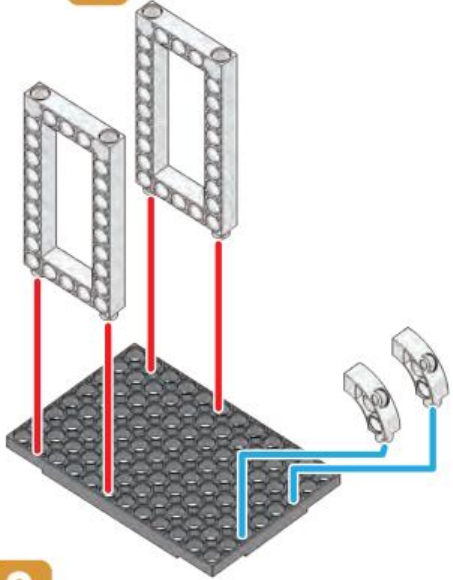
## 添水

## Japanese Garden Water Feature

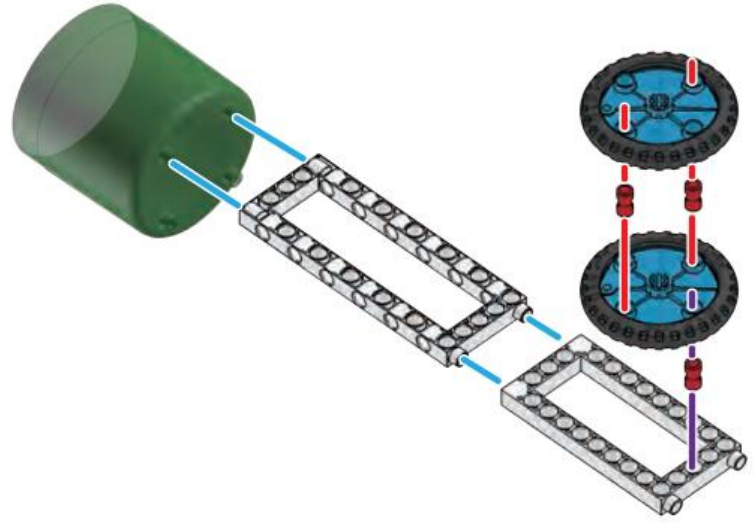
## 需用零件 Parts Needed

								
4 x3	12 x2	24 x3	25 x1	27 x1	33 x2	42 x1	41 x1	44 x1
						37 x1		

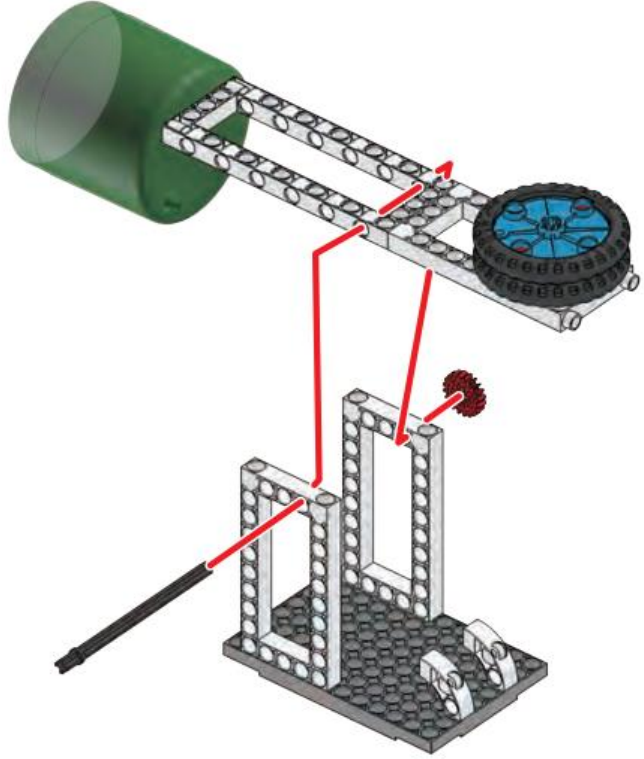
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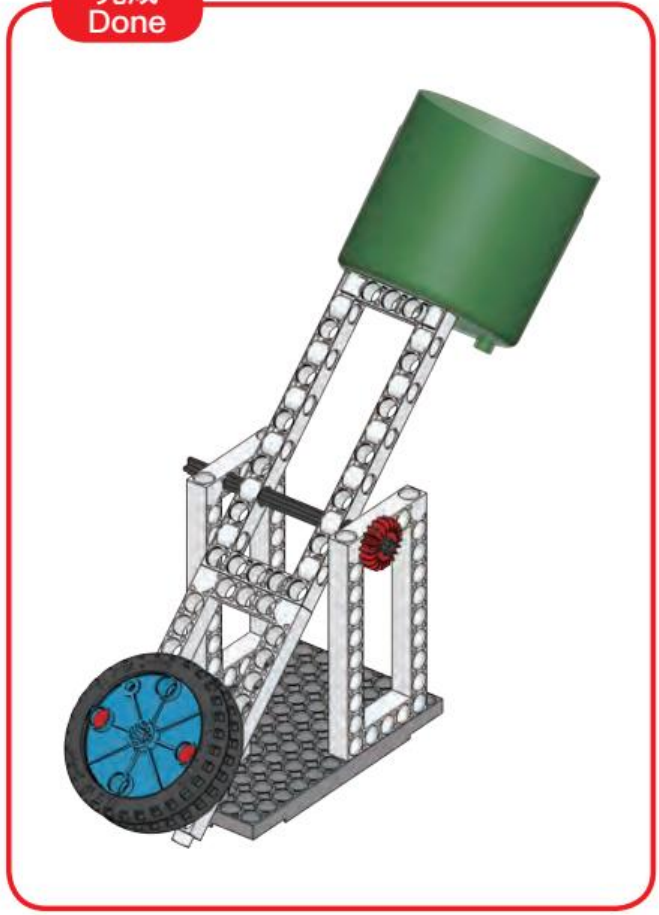
2



3



完成  
Done







23  
x4



42  
x1

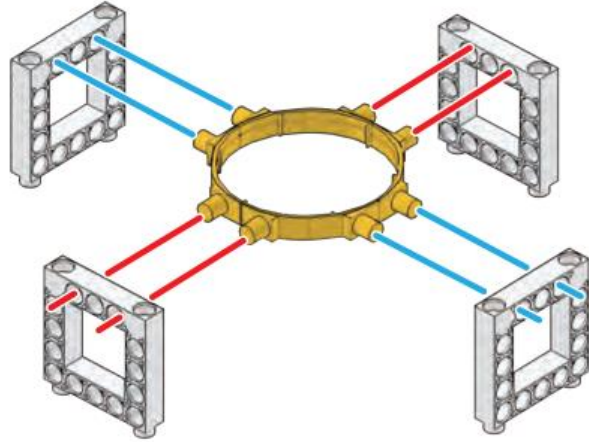


45  
x1

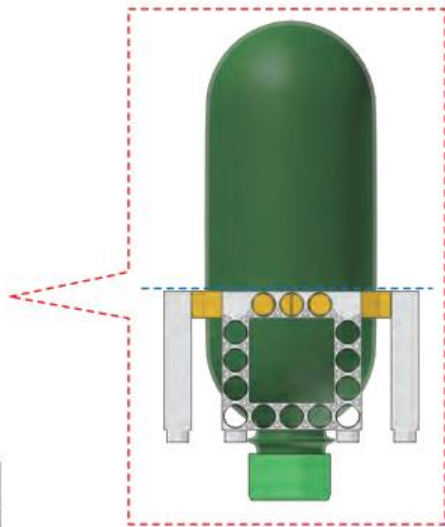
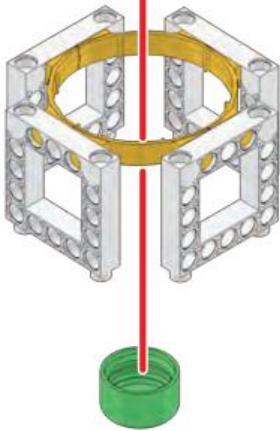


48  
x1

1



2








完成  
Done



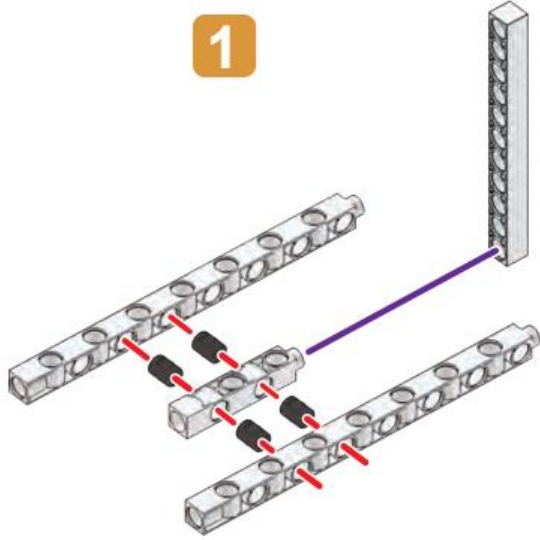
## 帆船

## Sailing Ship

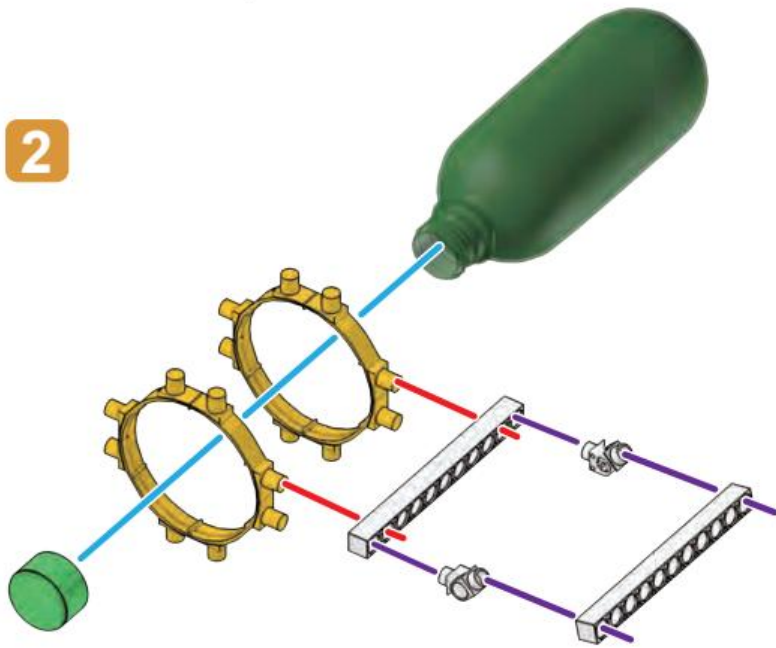
## 需用零件 Parts Needed

								
8 x4	10 x2	11 x4	16 x1	19 x5	20 x2	42 x1	45 x1	48 x2

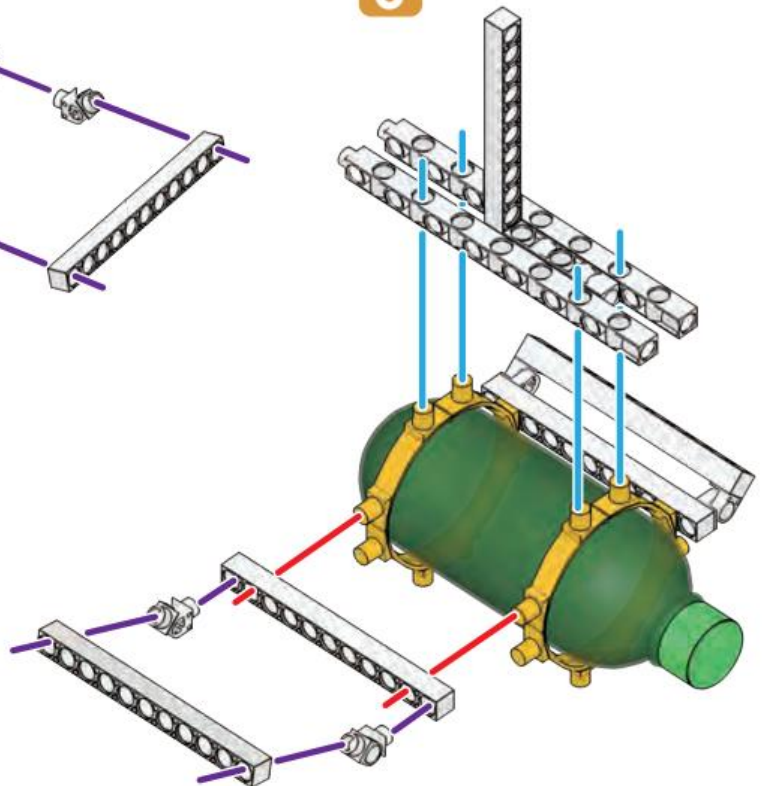
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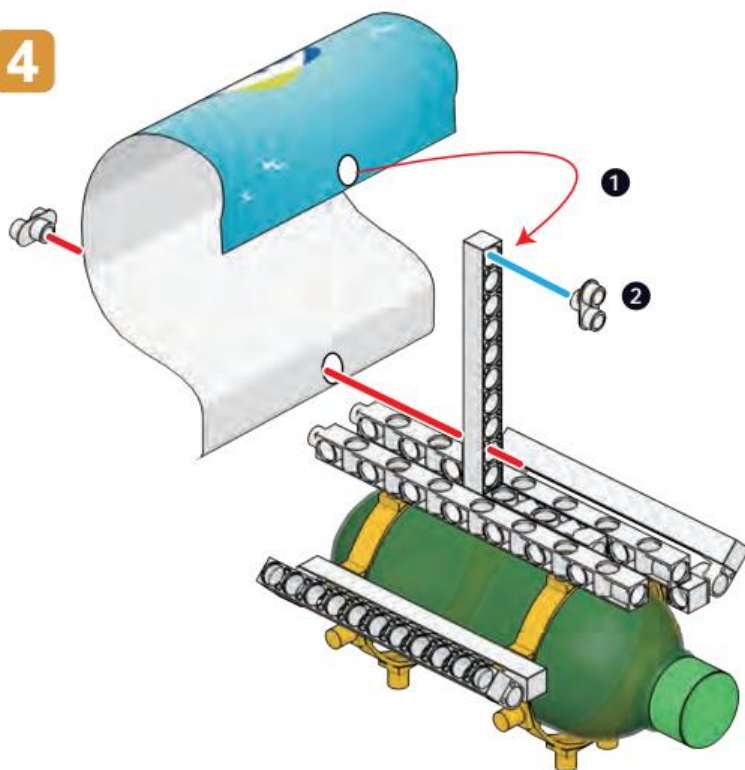
2



3

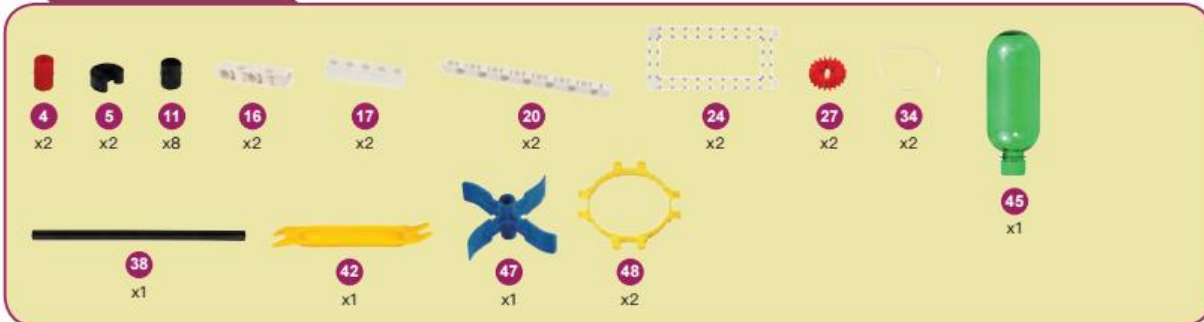


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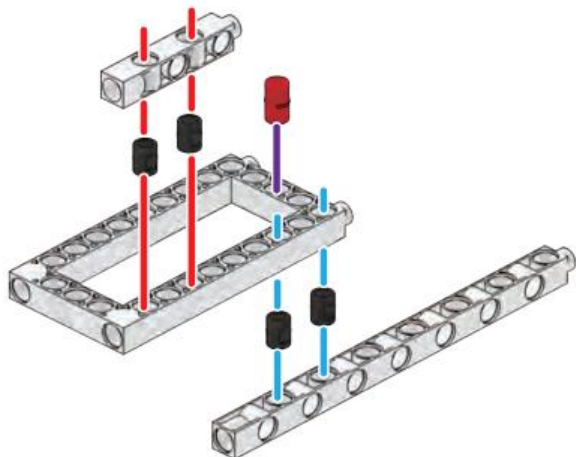


完成  
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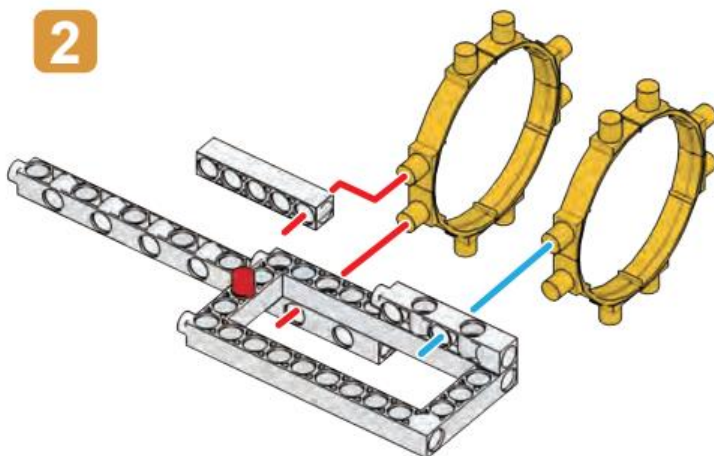




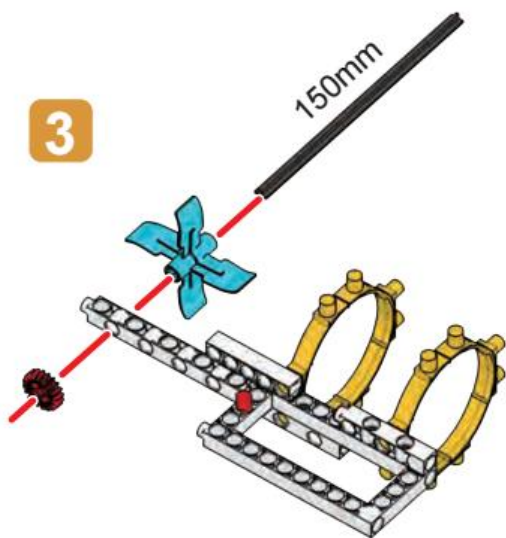
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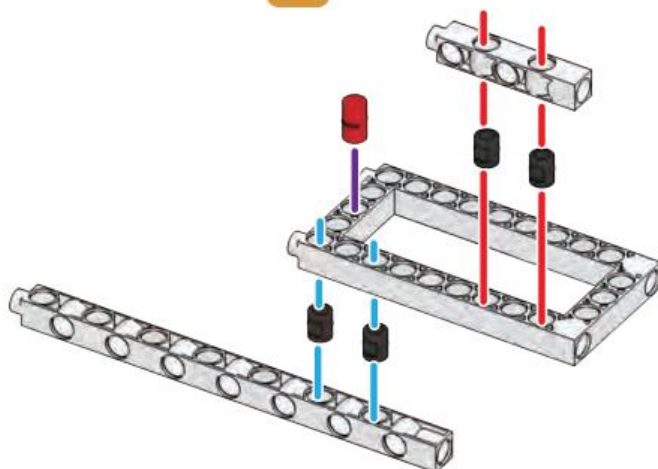
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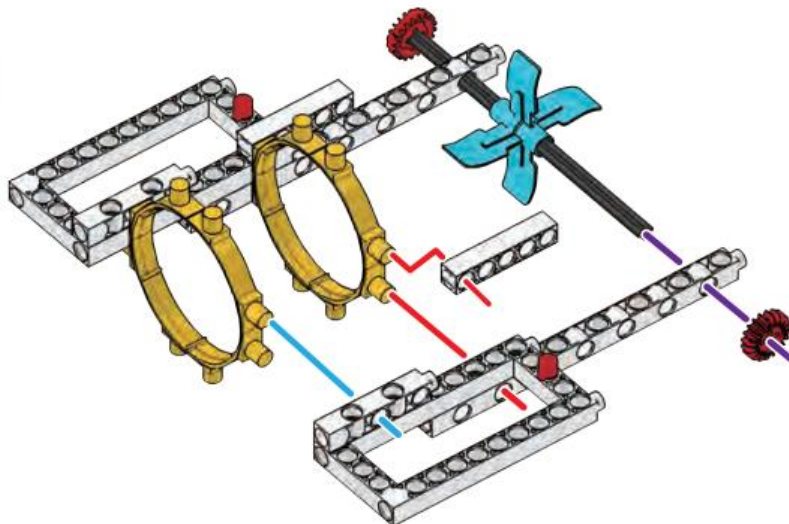
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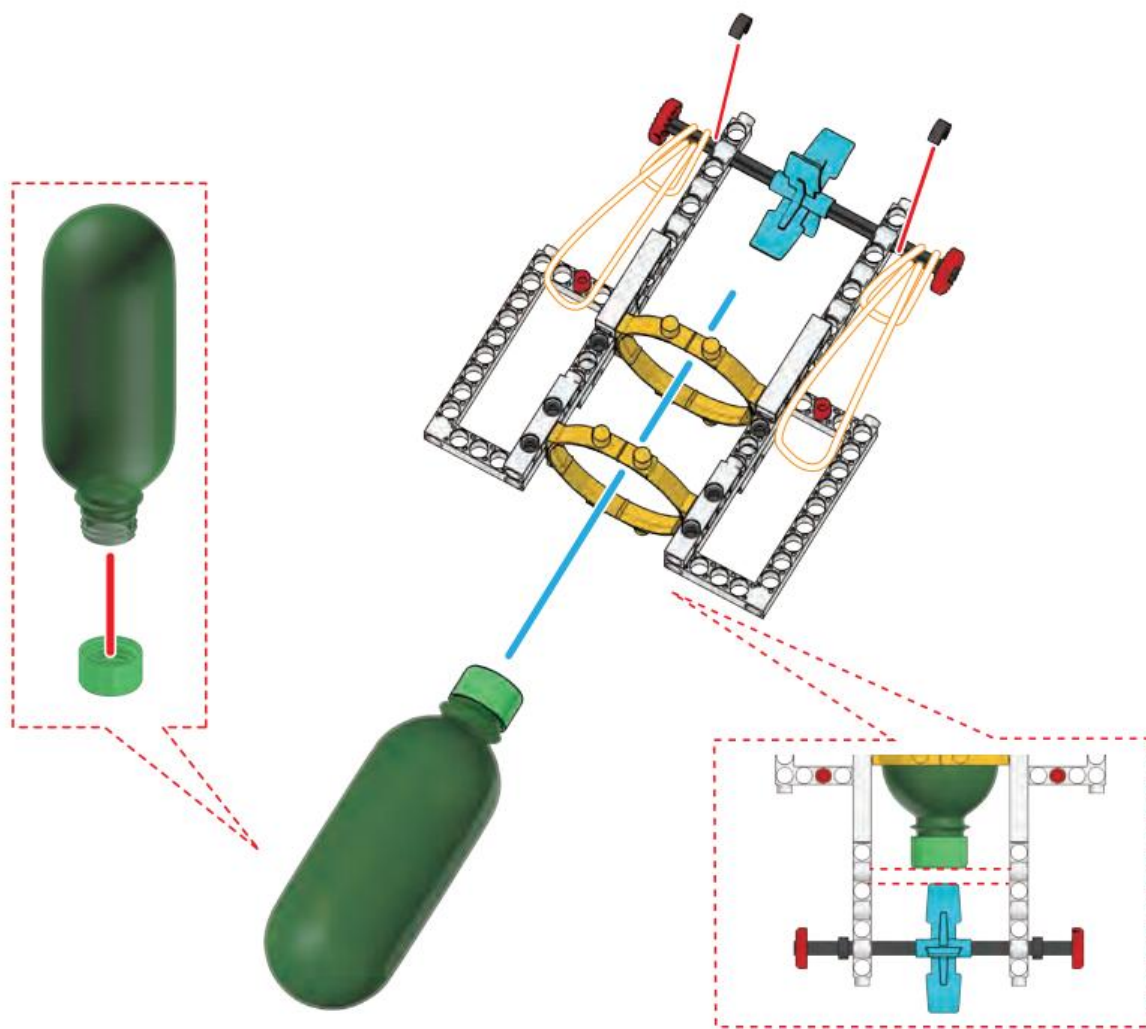


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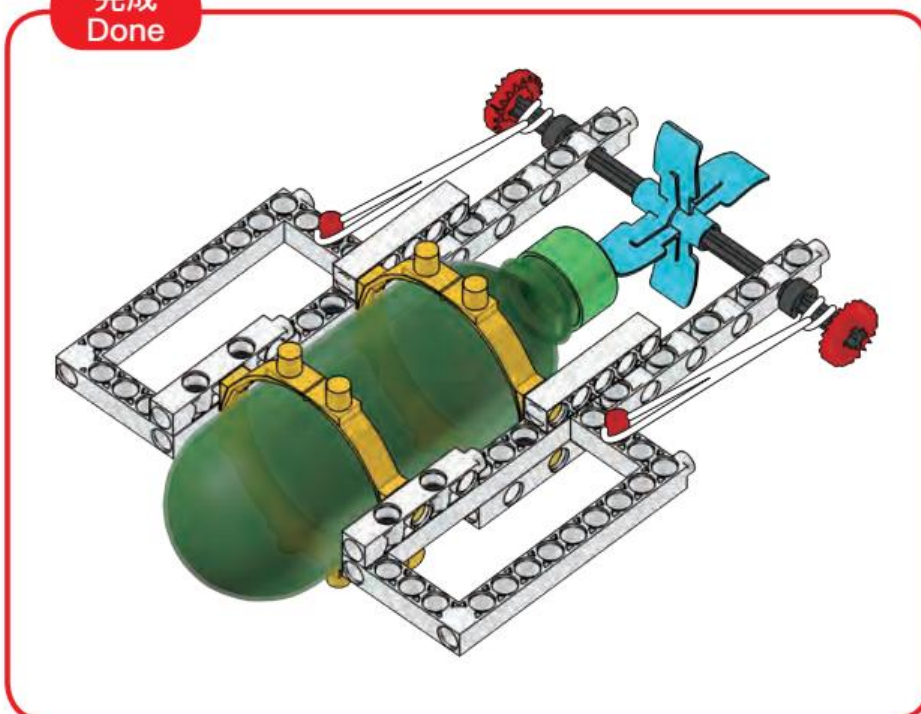


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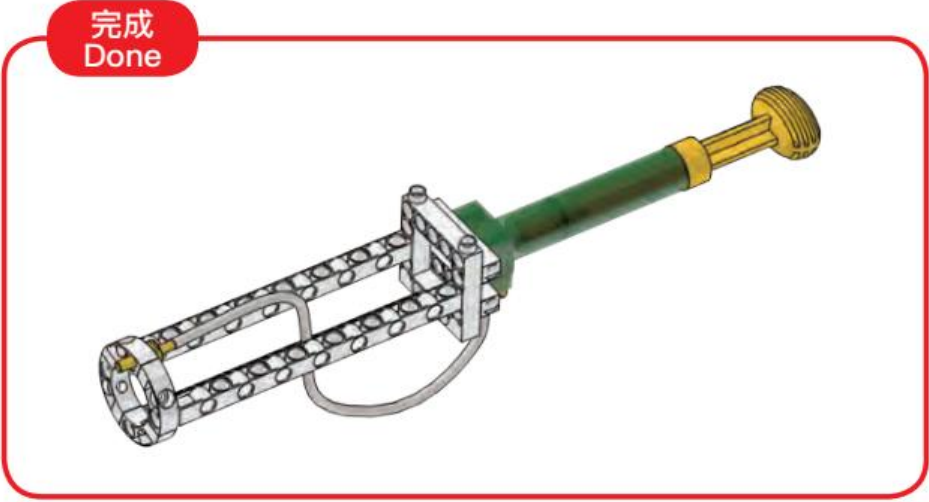
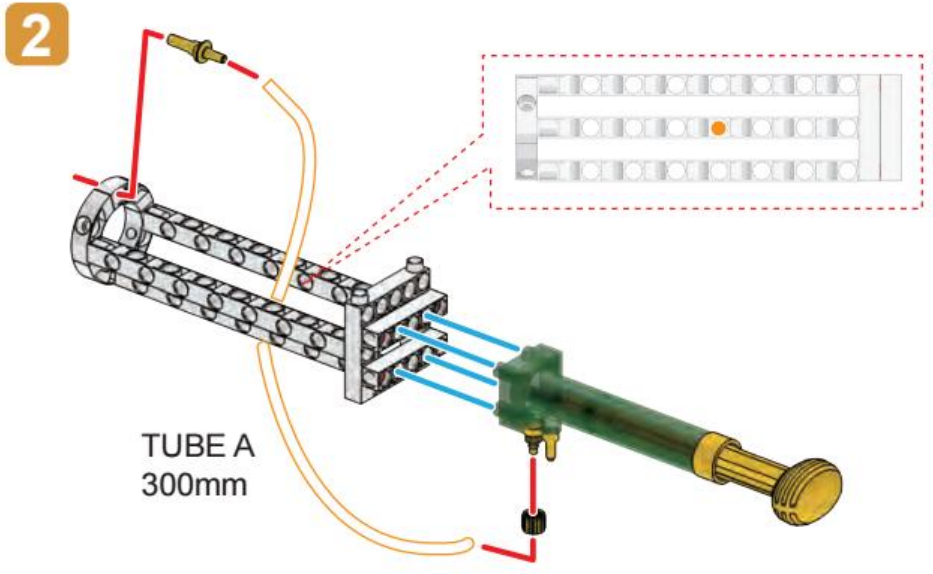
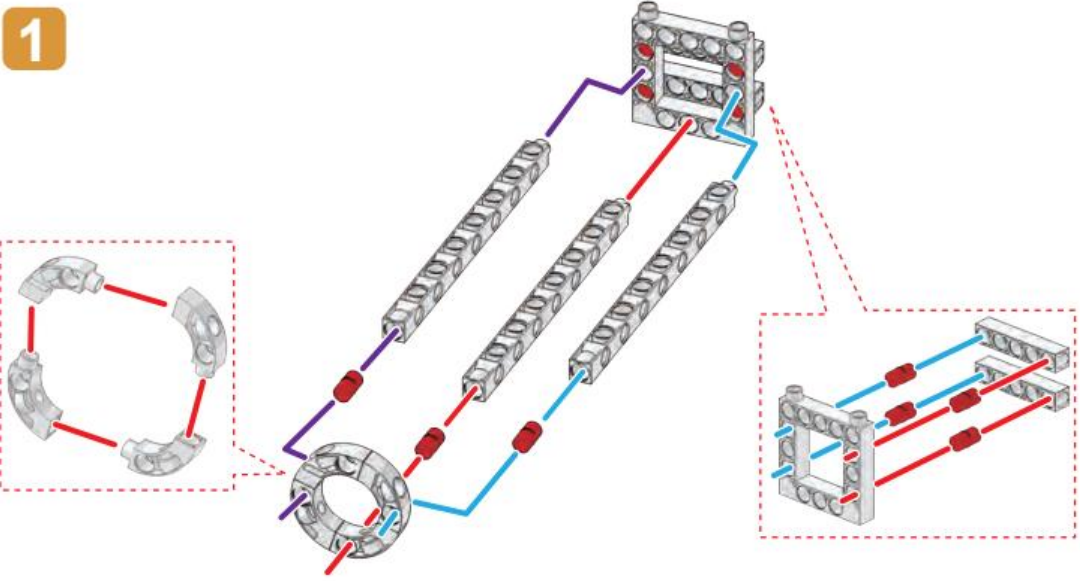
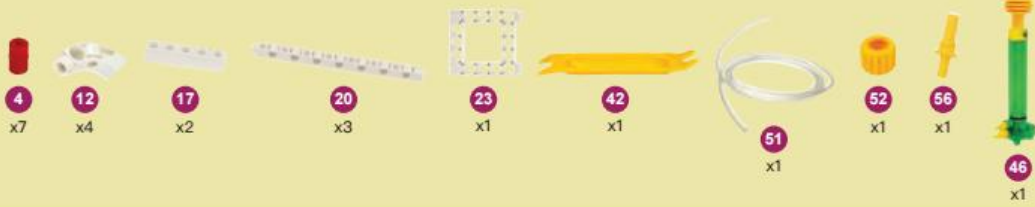
完成  
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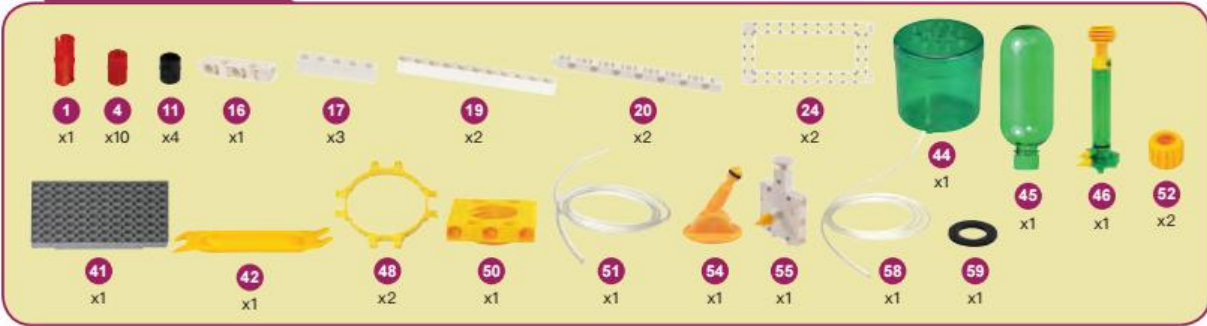


## 水槍

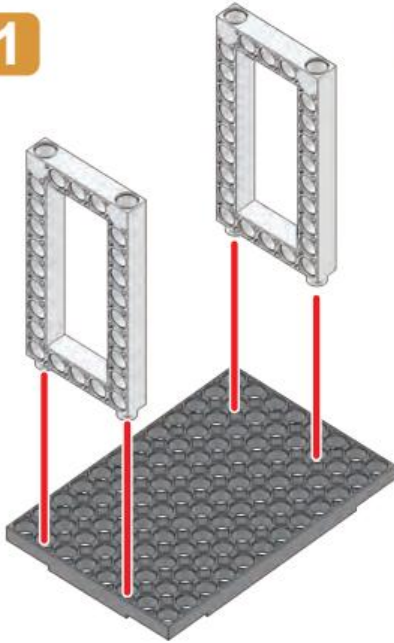
## Water Gun

## 需用零件 Parts Needed

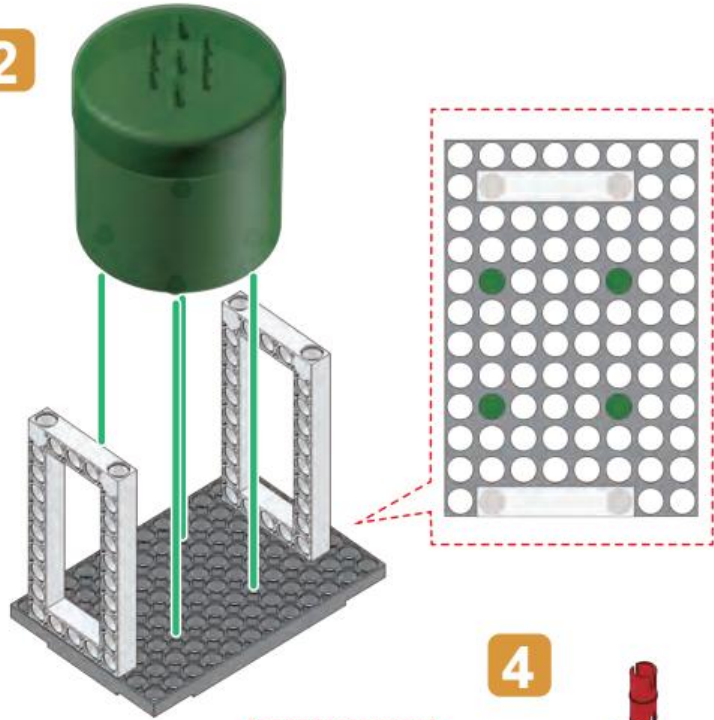




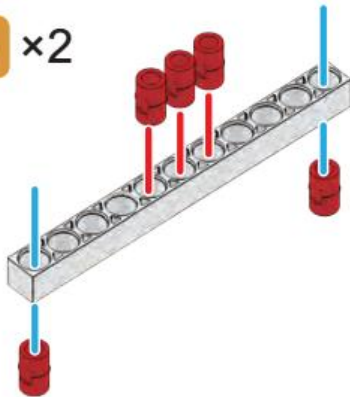
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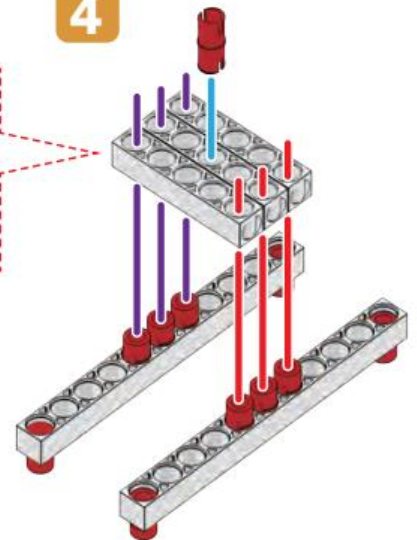
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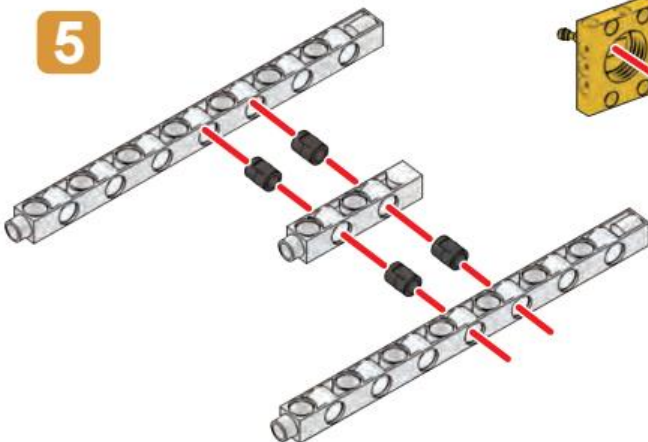
3 x2



4



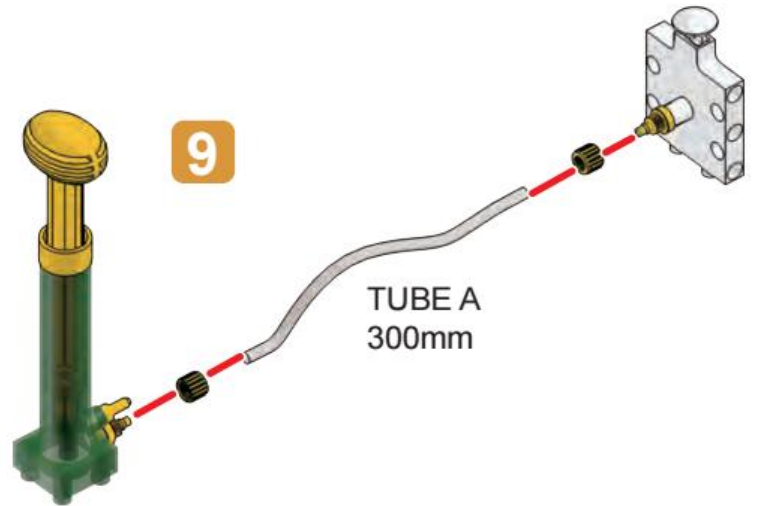
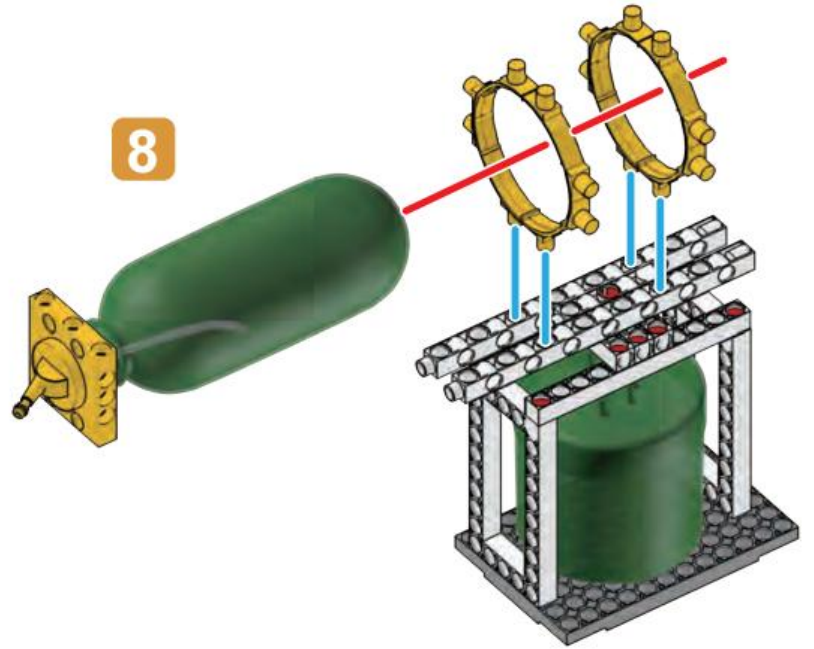
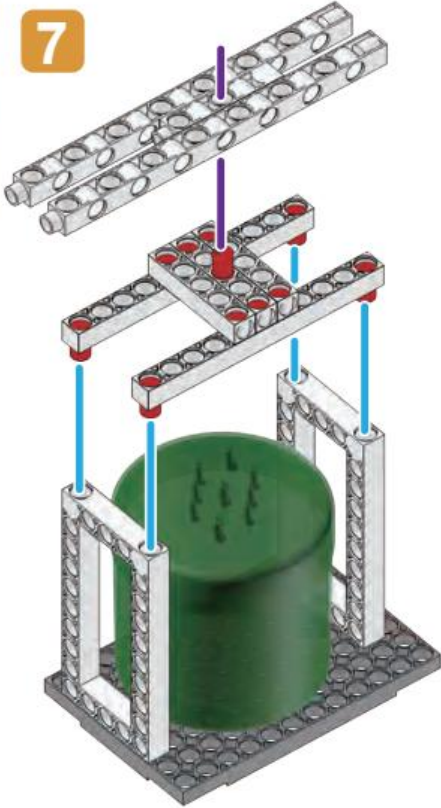
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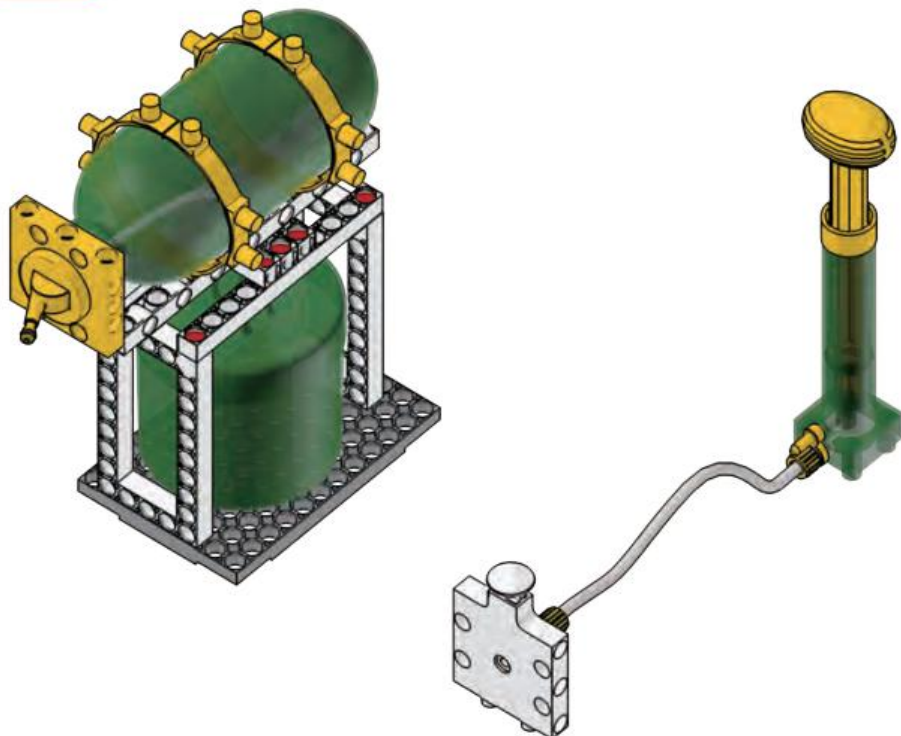
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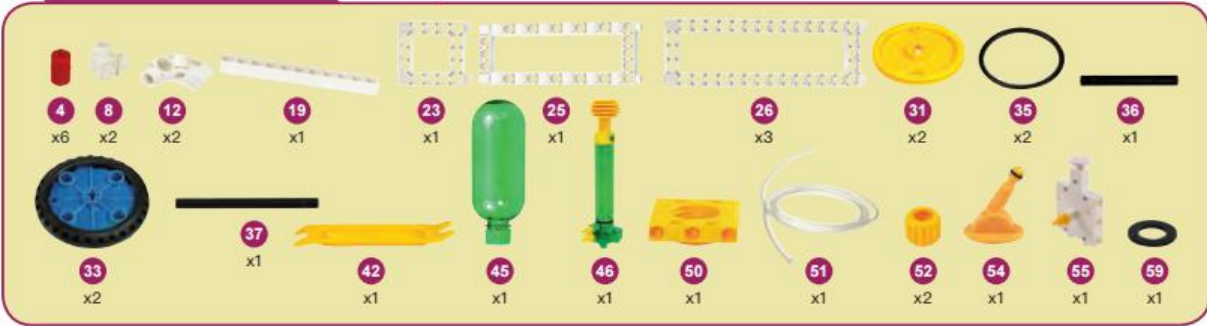
TUBE B  
150mm



完成  
Done



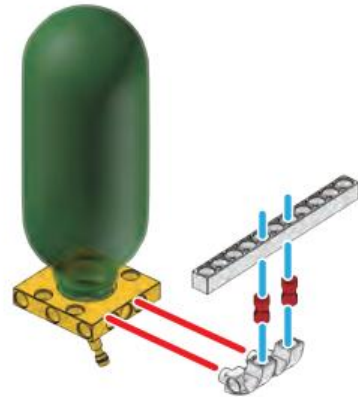




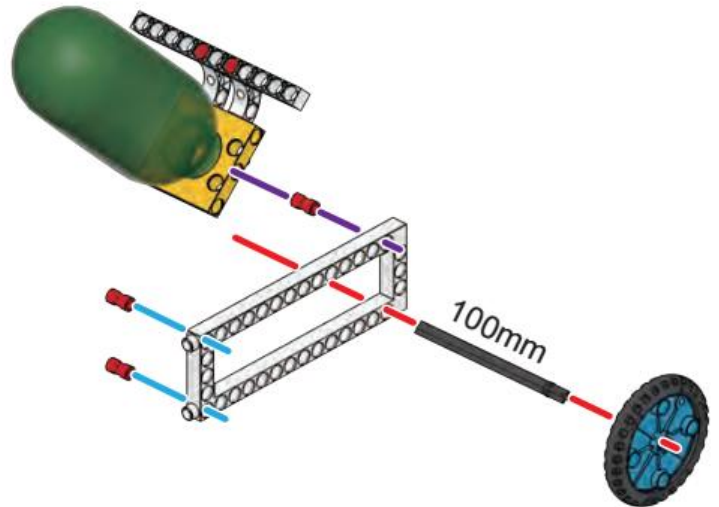
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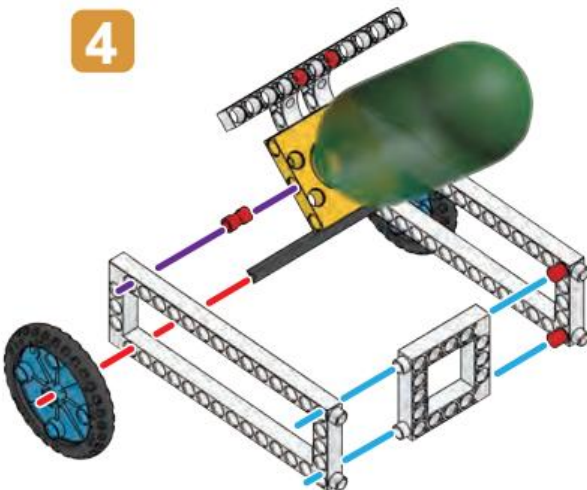
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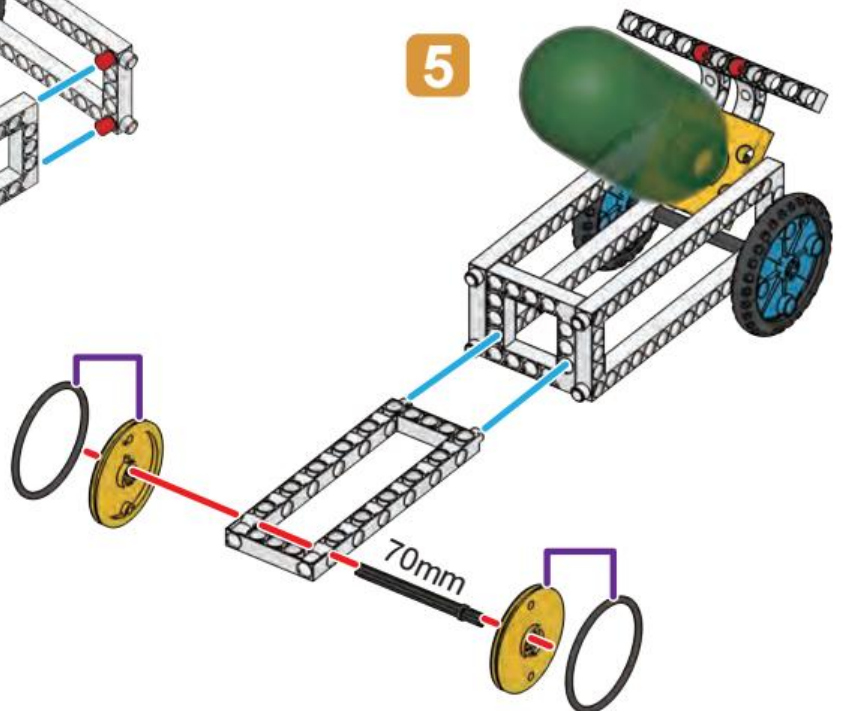
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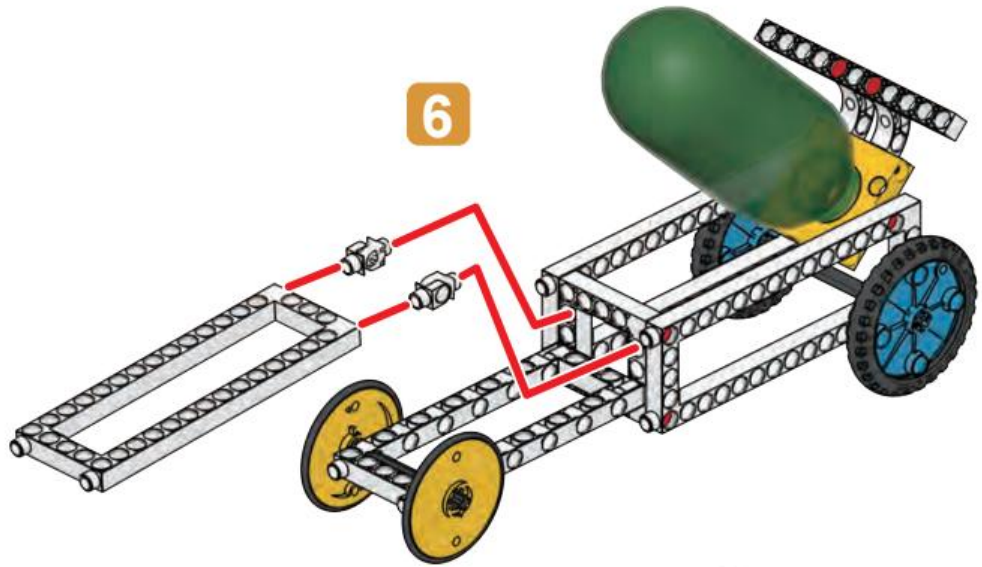
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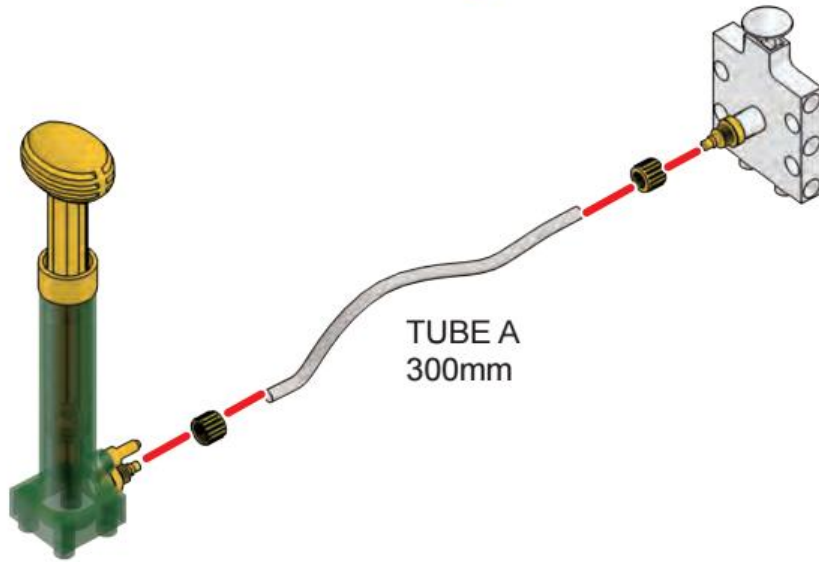
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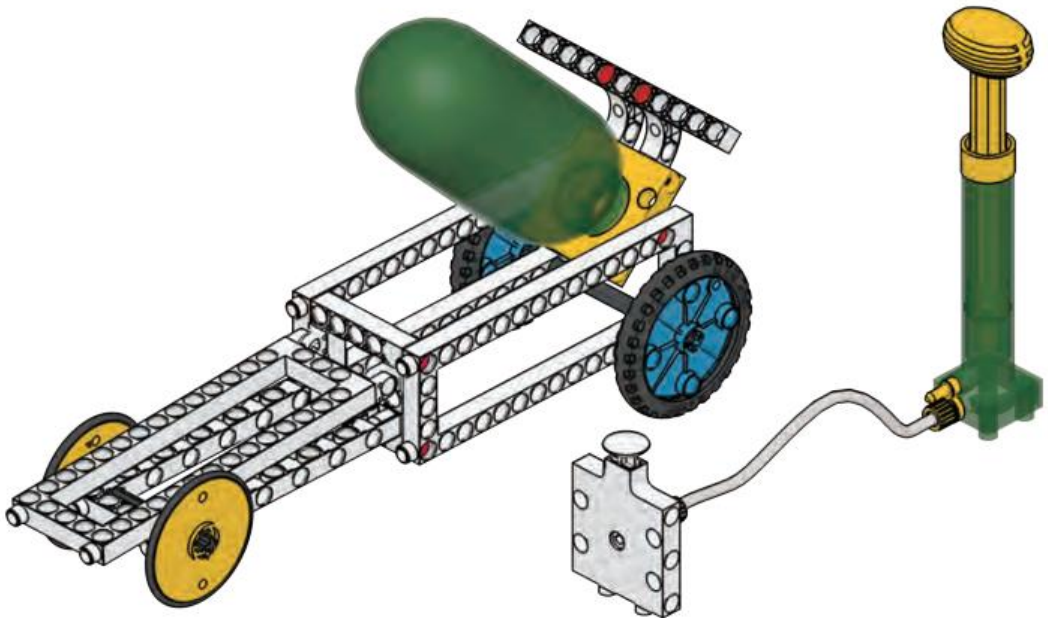
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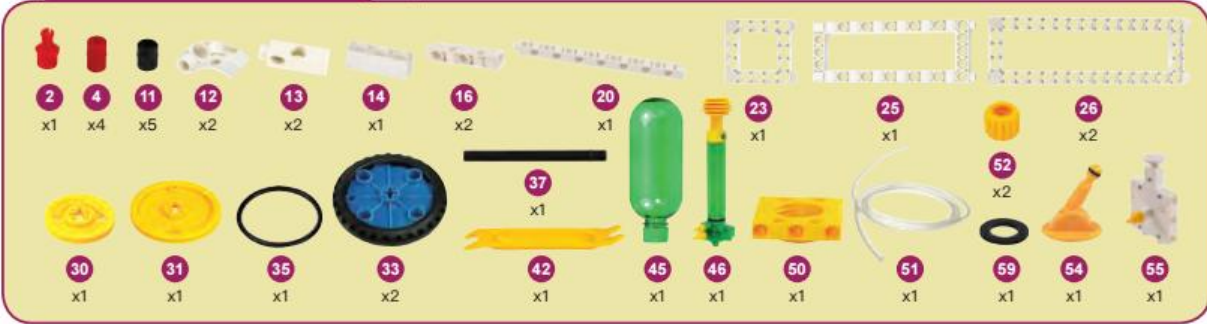


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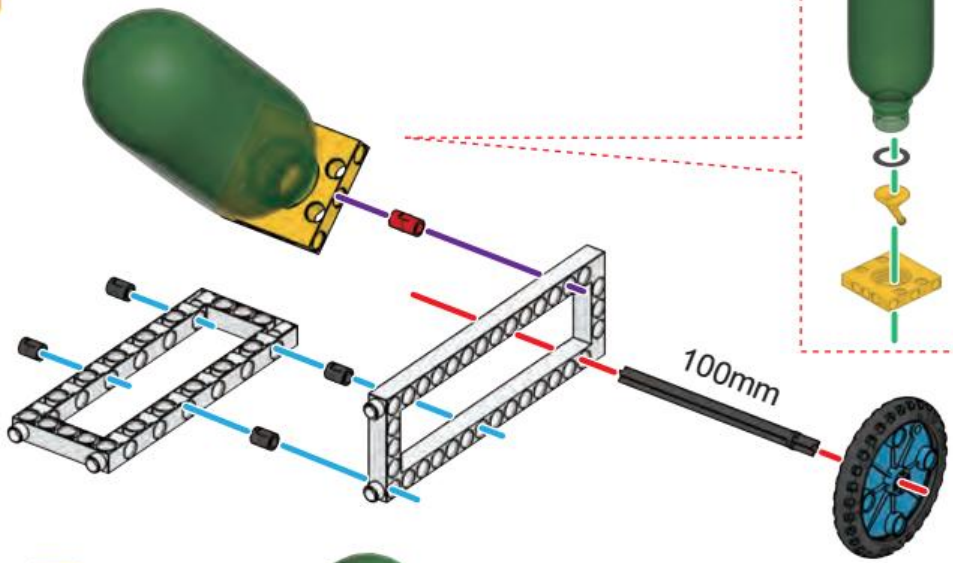


完成  
Done

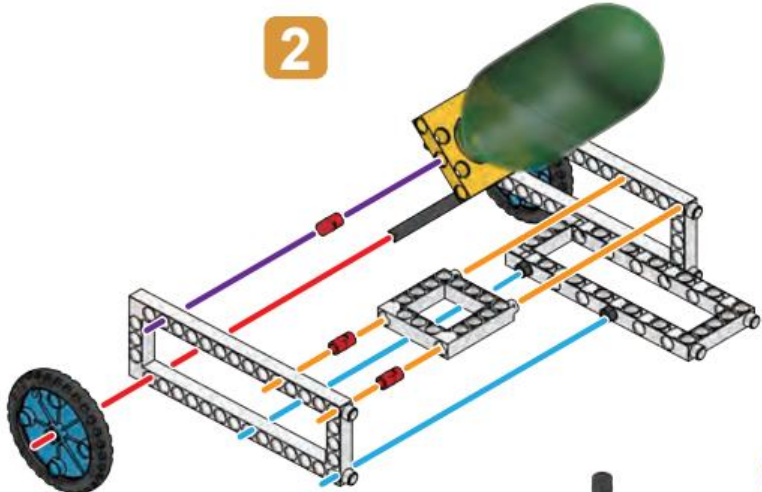




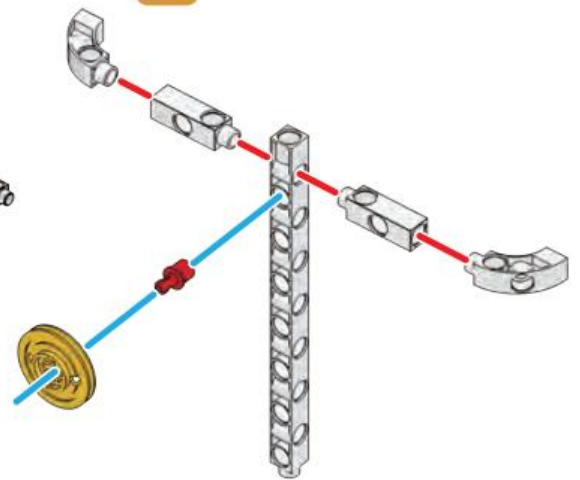
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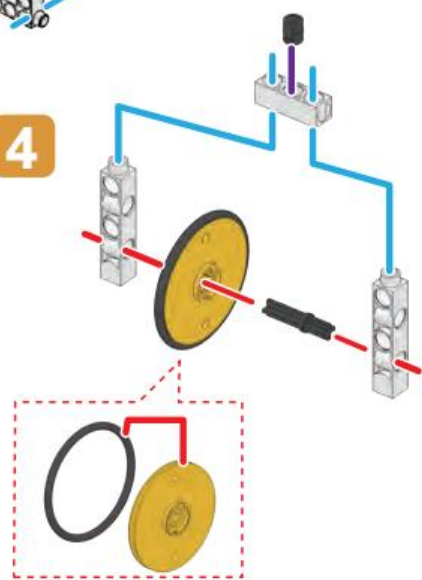
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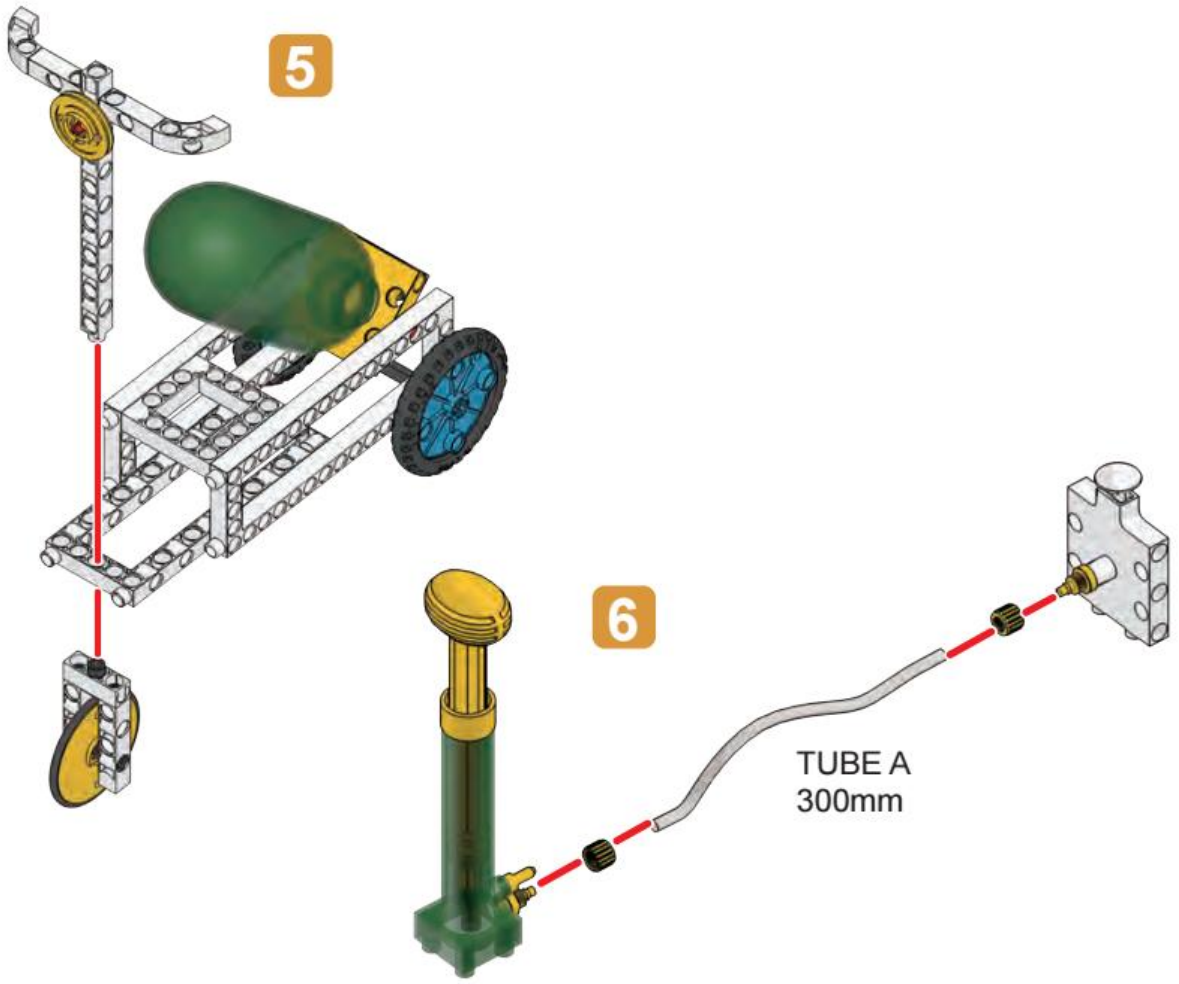


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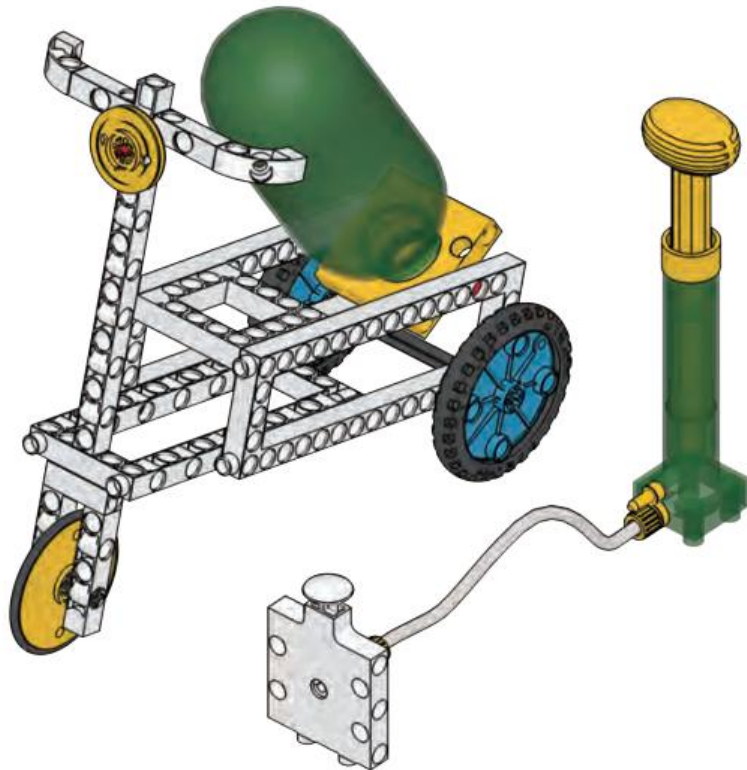


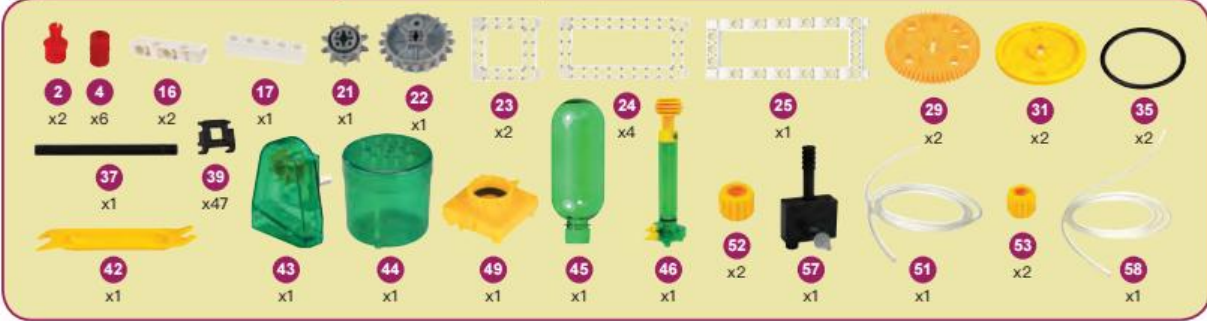
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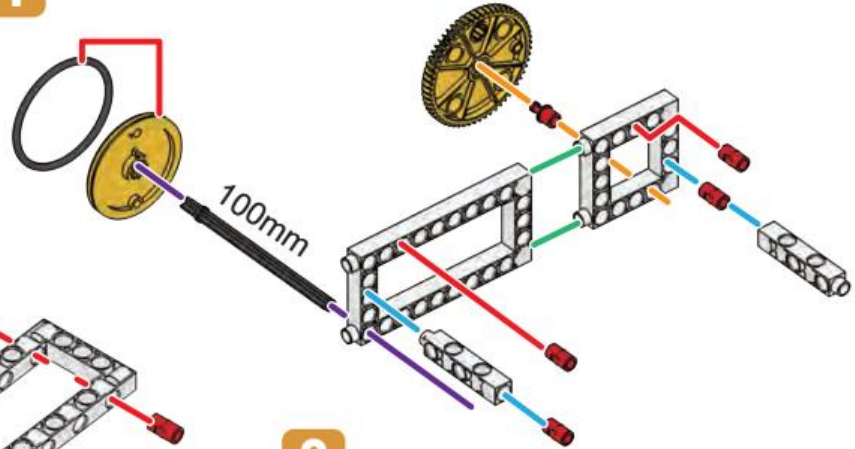


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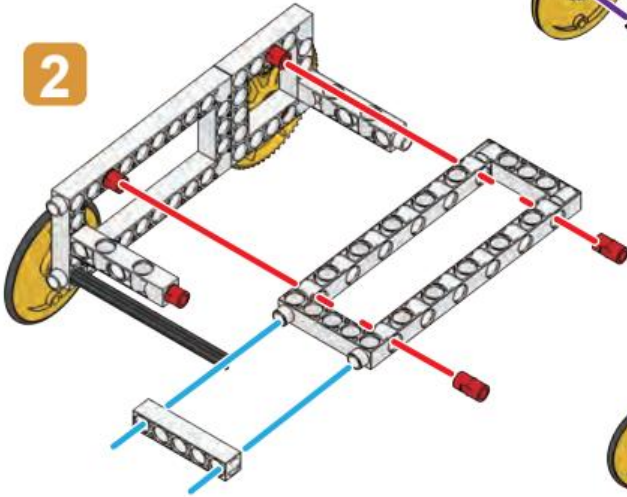




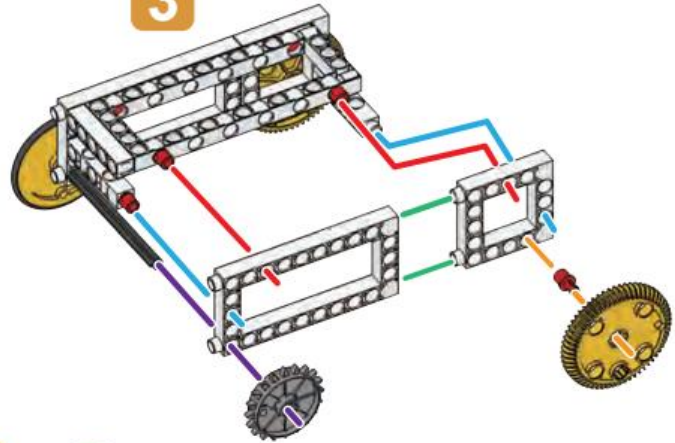
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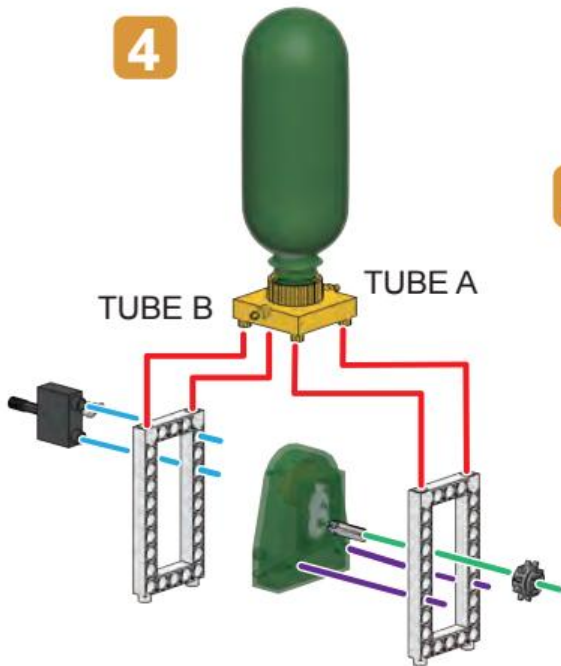
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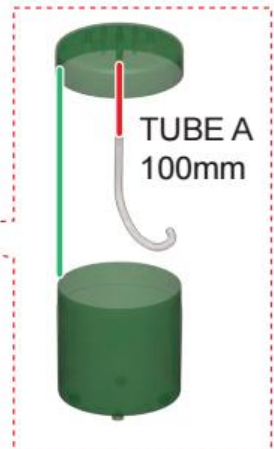
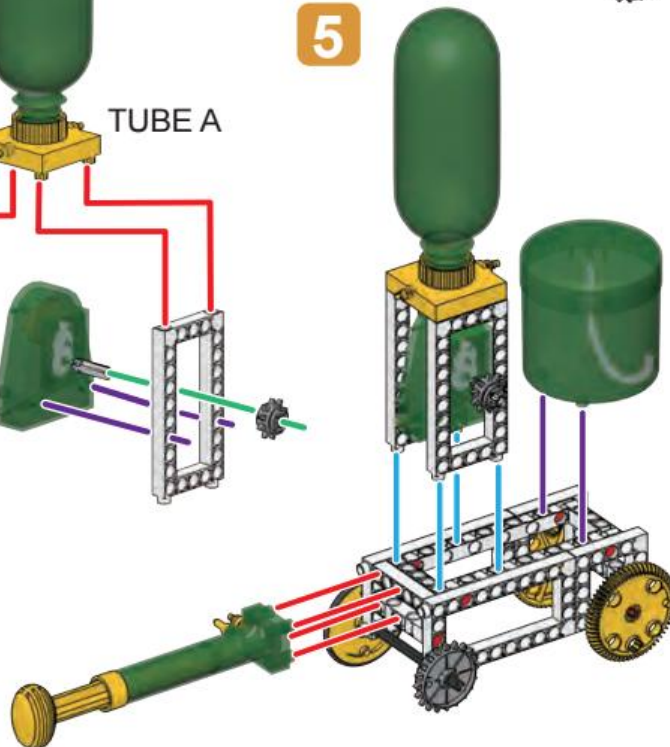
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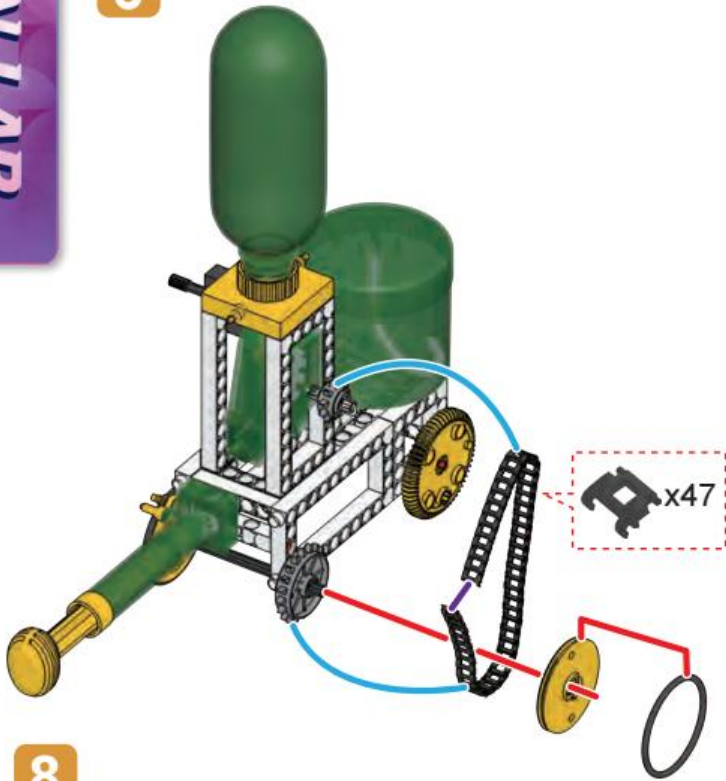
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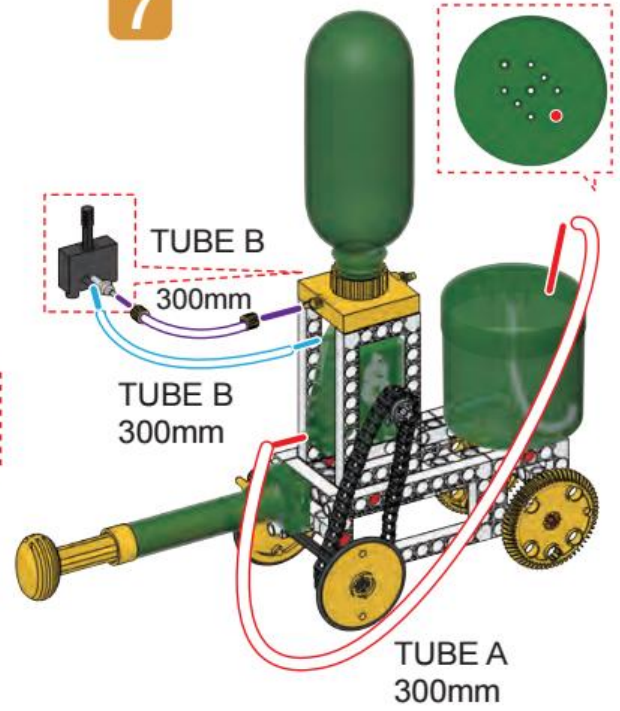
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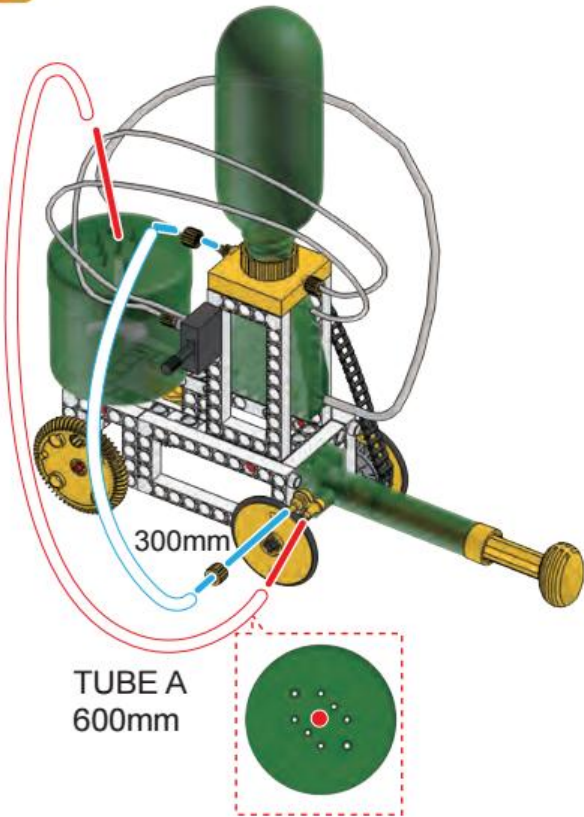
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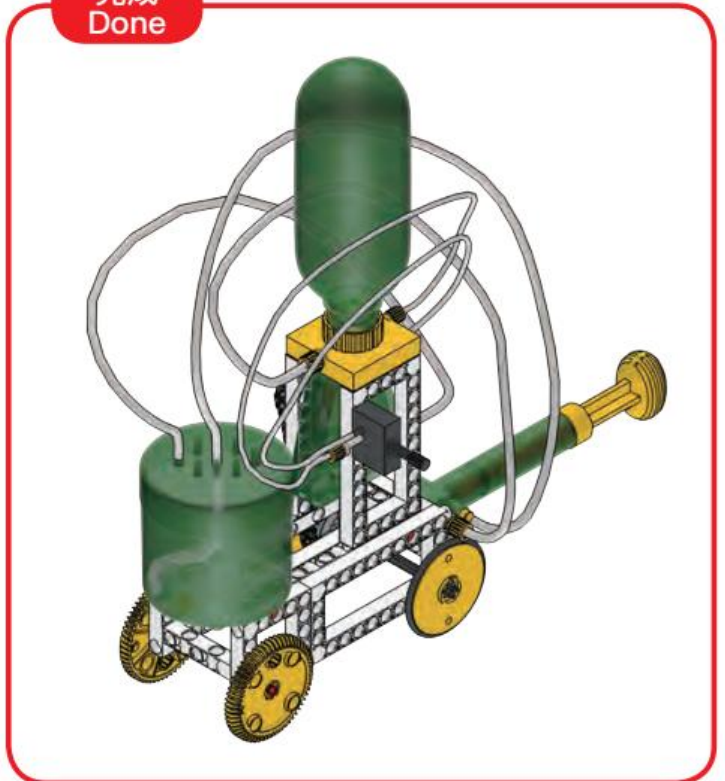
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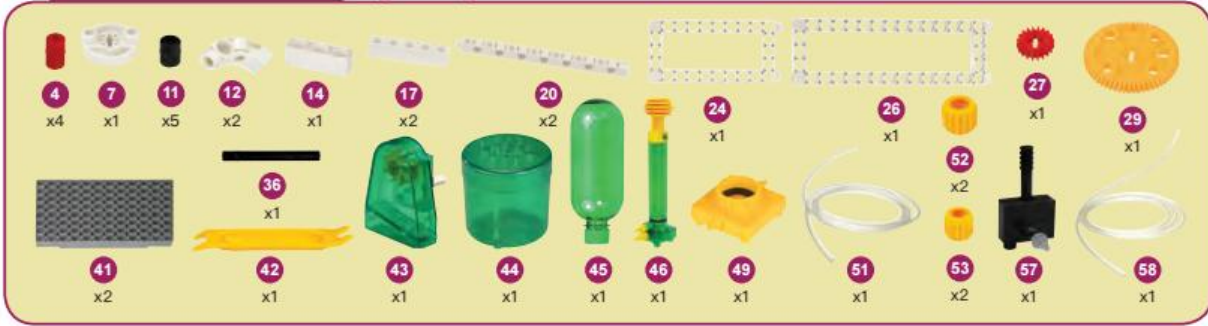


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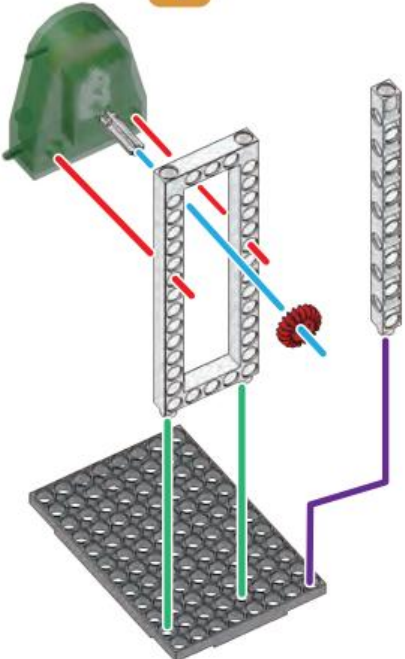


完成  
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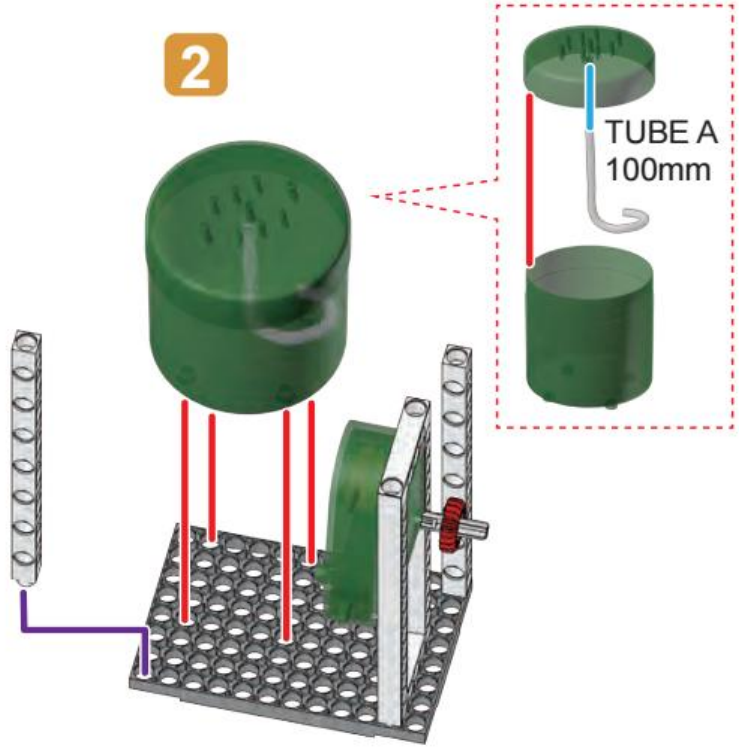




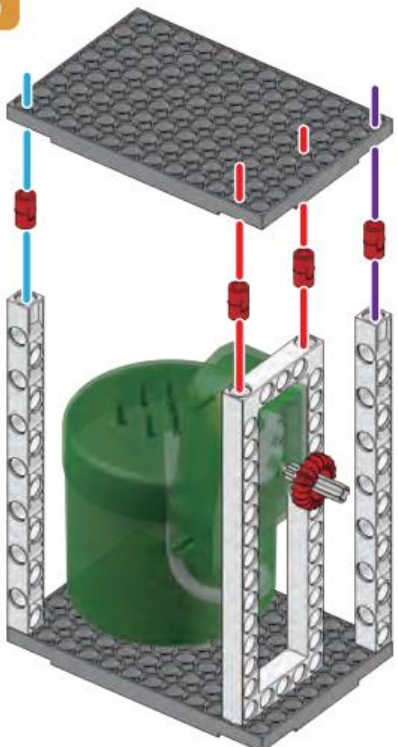
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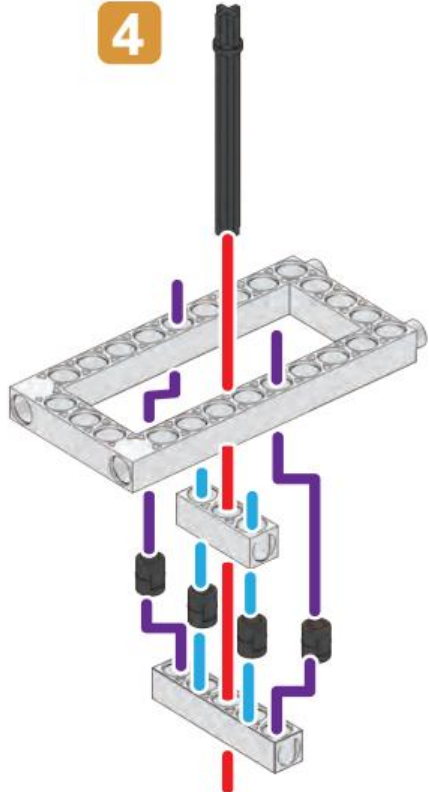
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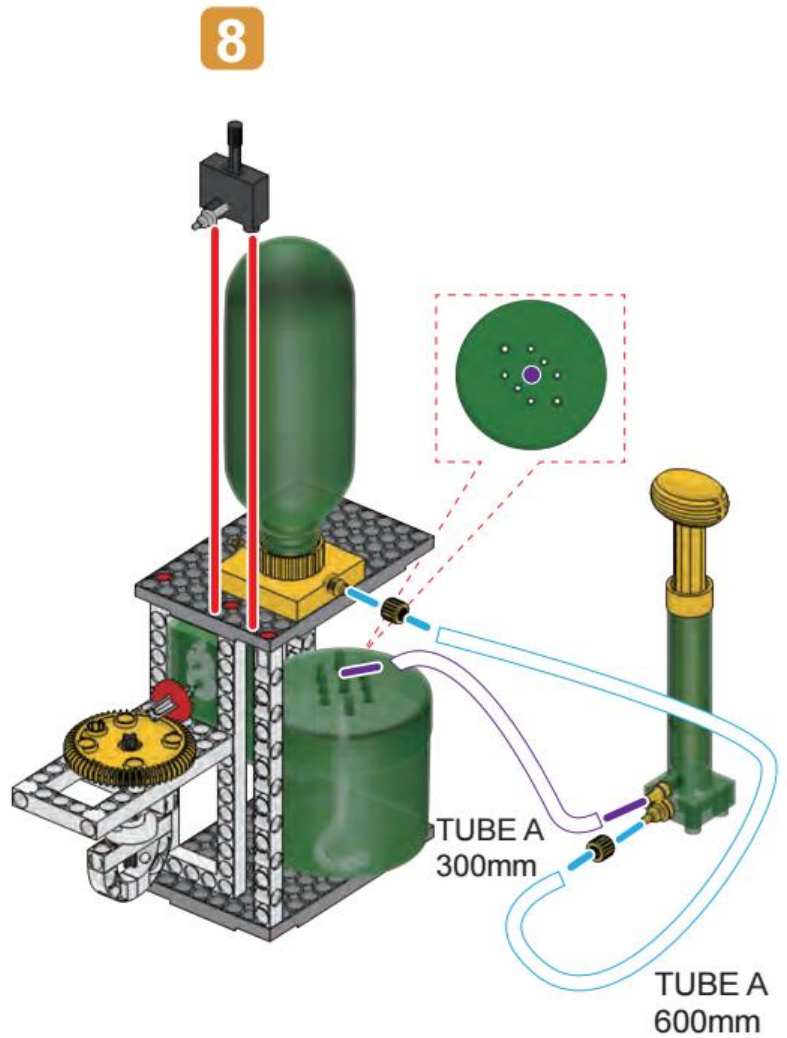
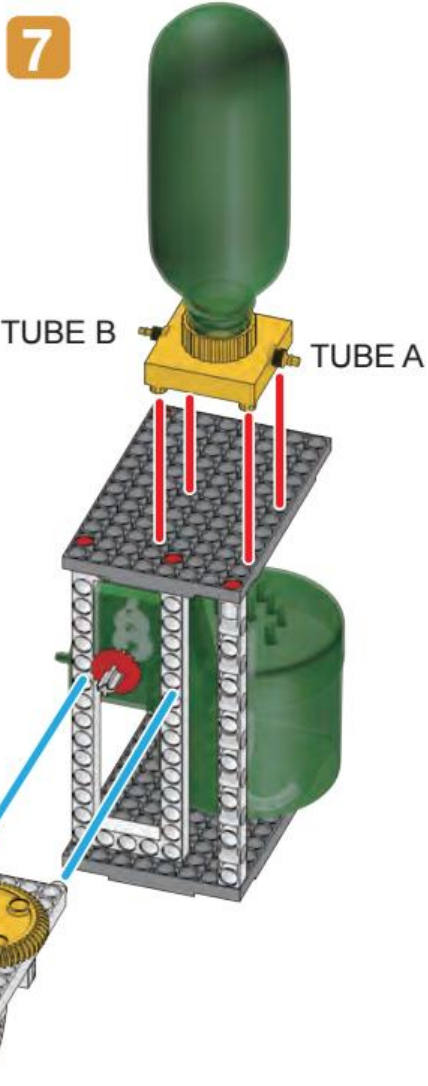
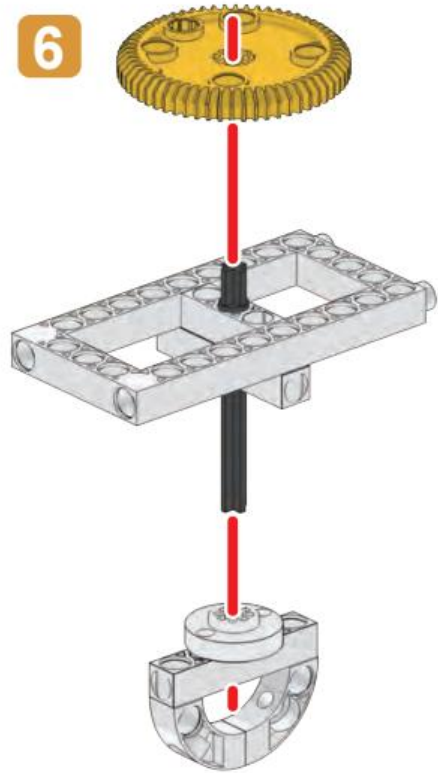
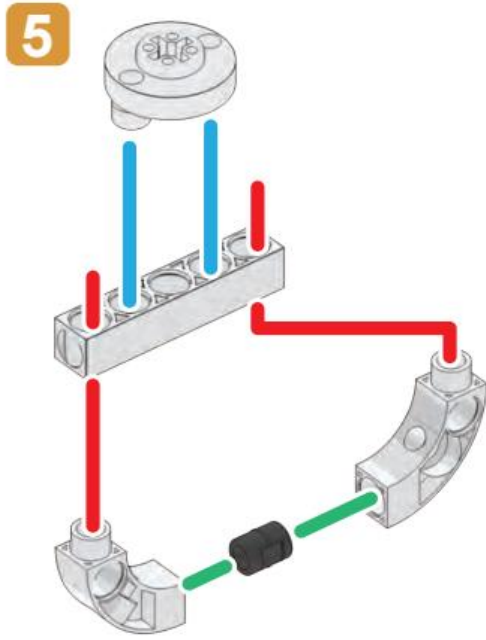


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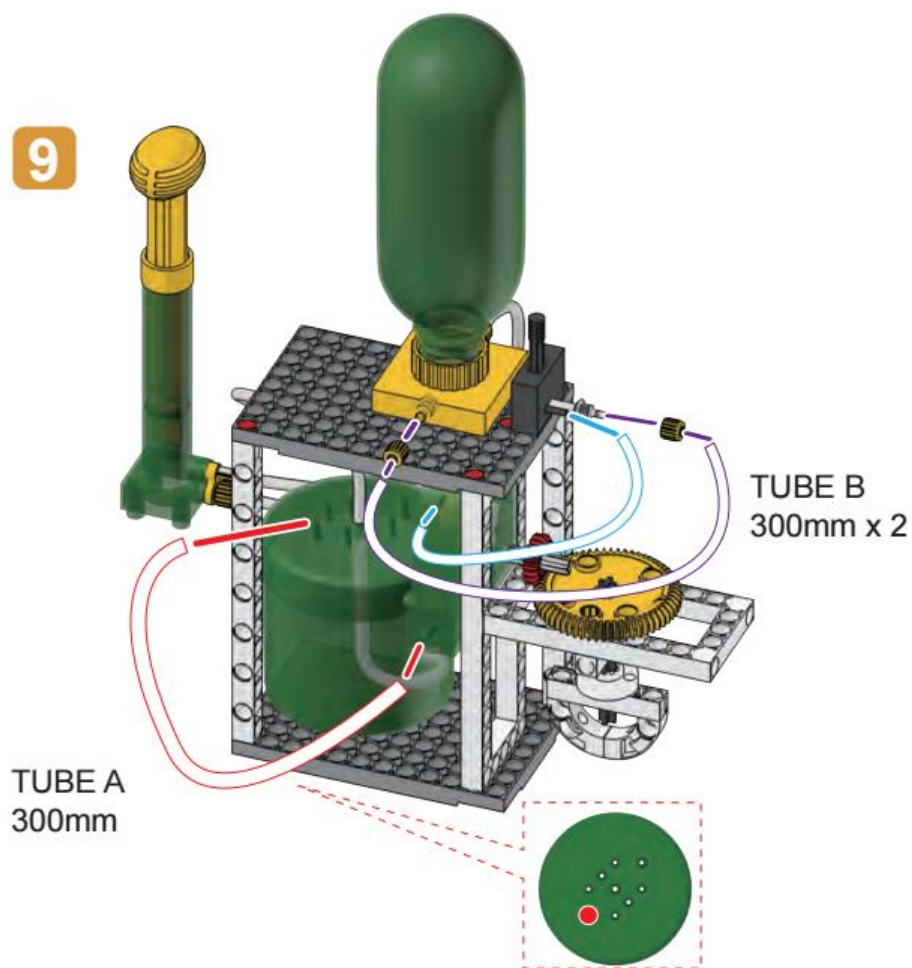
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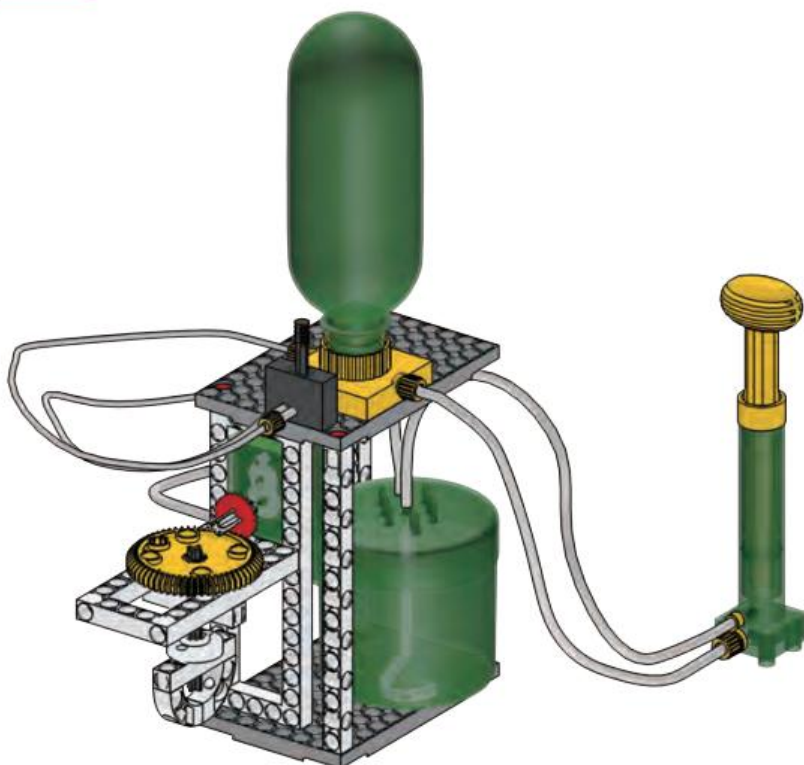




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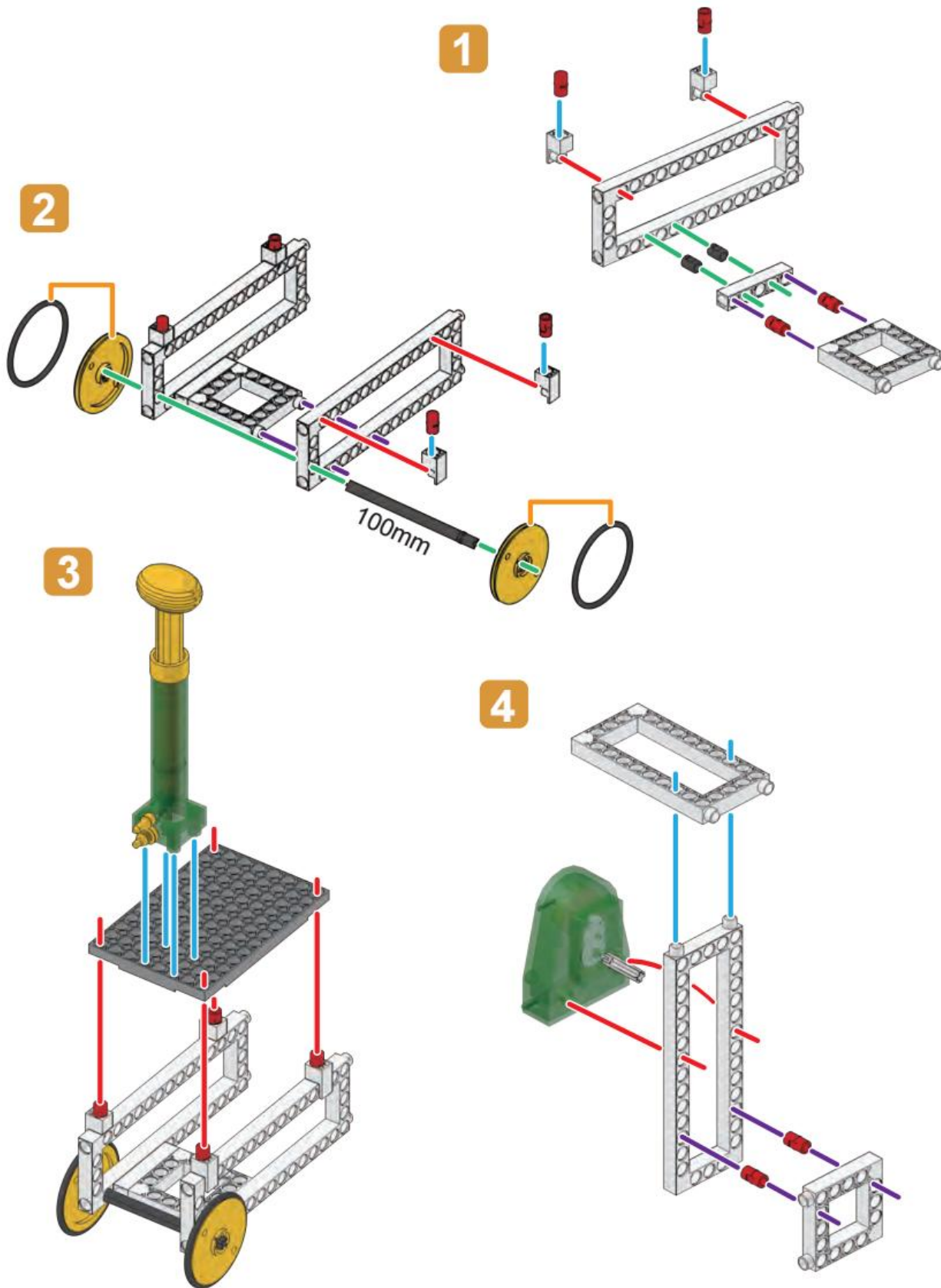
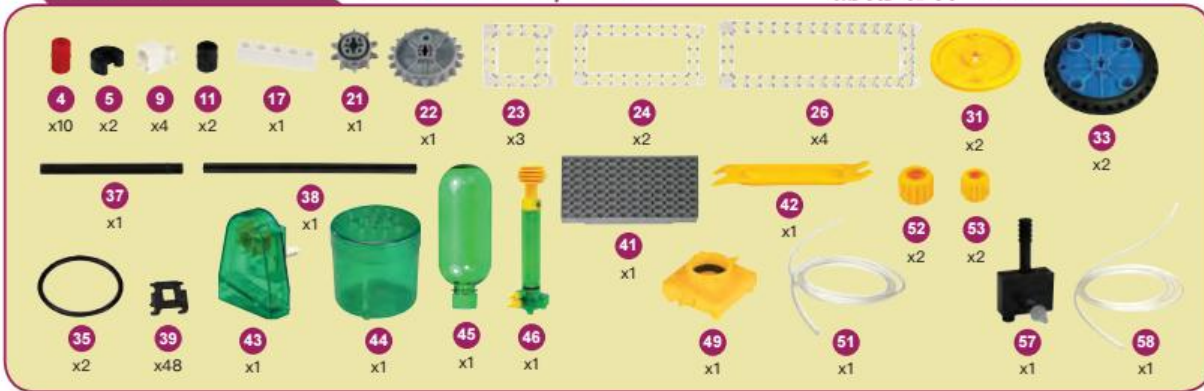
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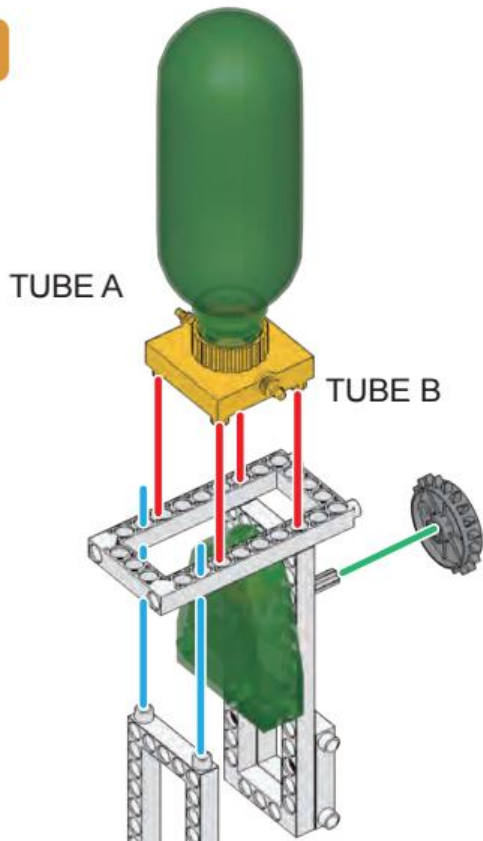
## 循環貨車

## Circular Pump Truck

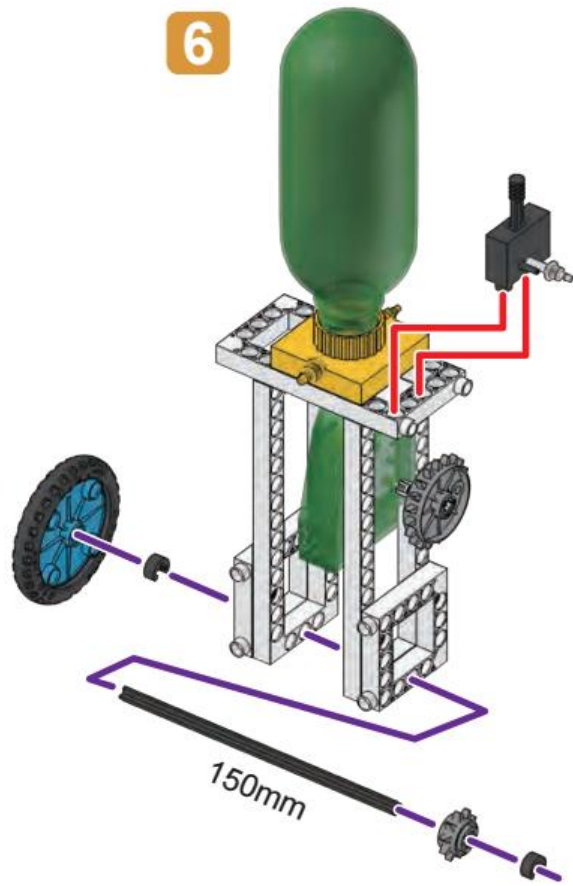
## 需用零件 Parts Needed



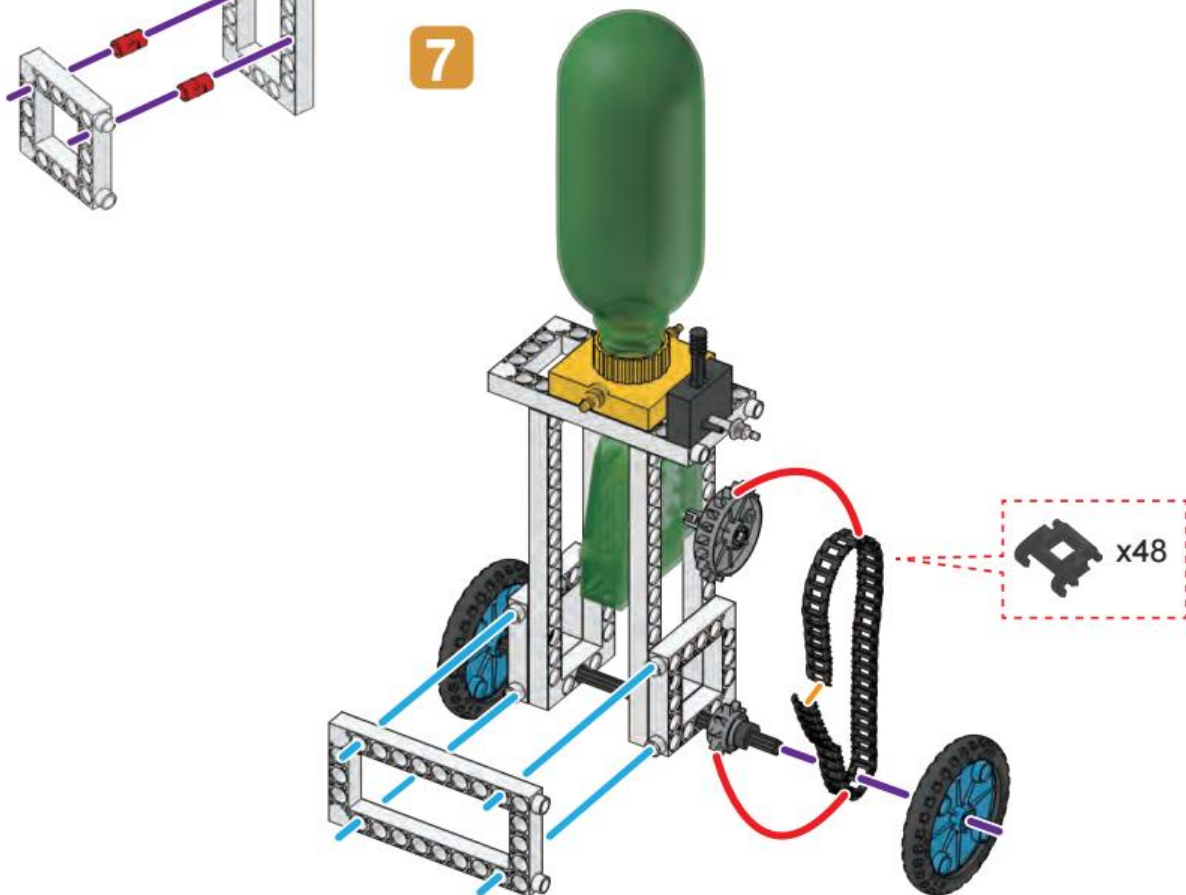
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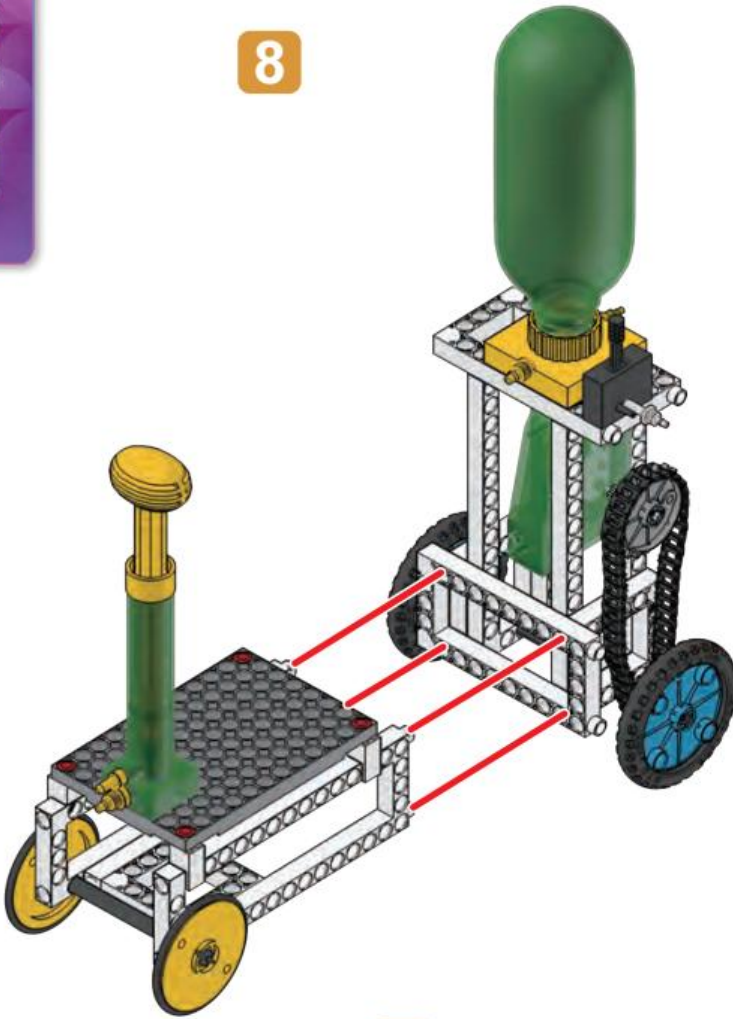
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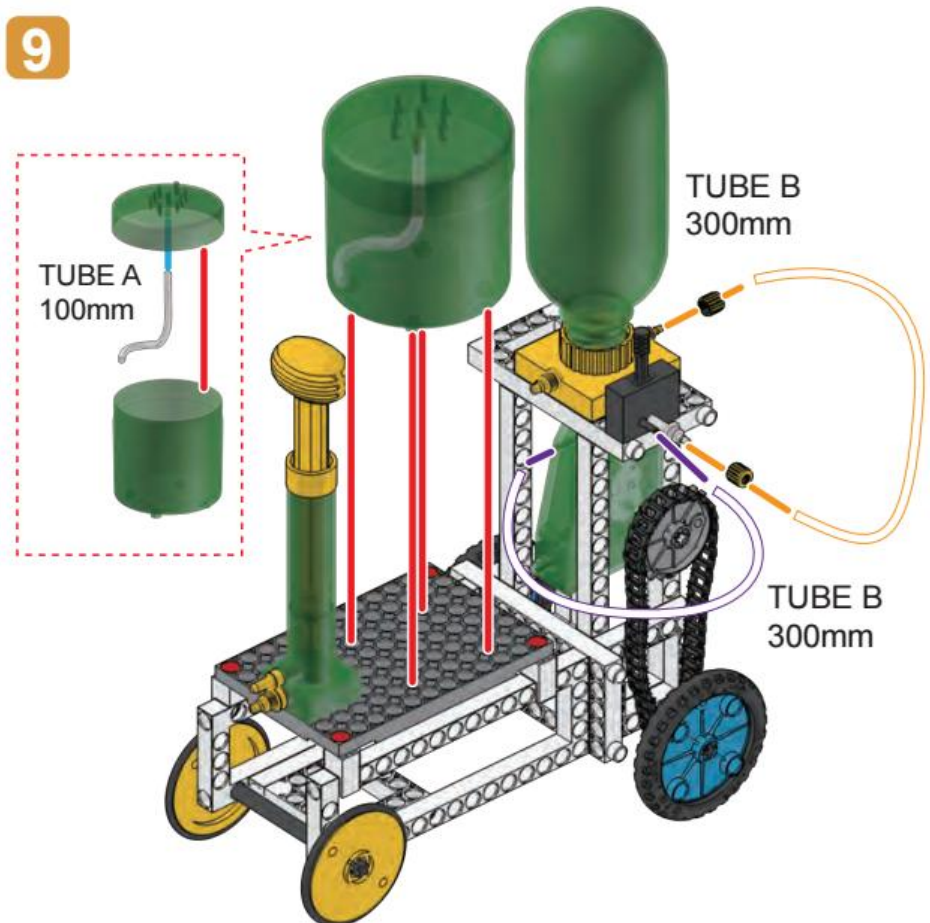
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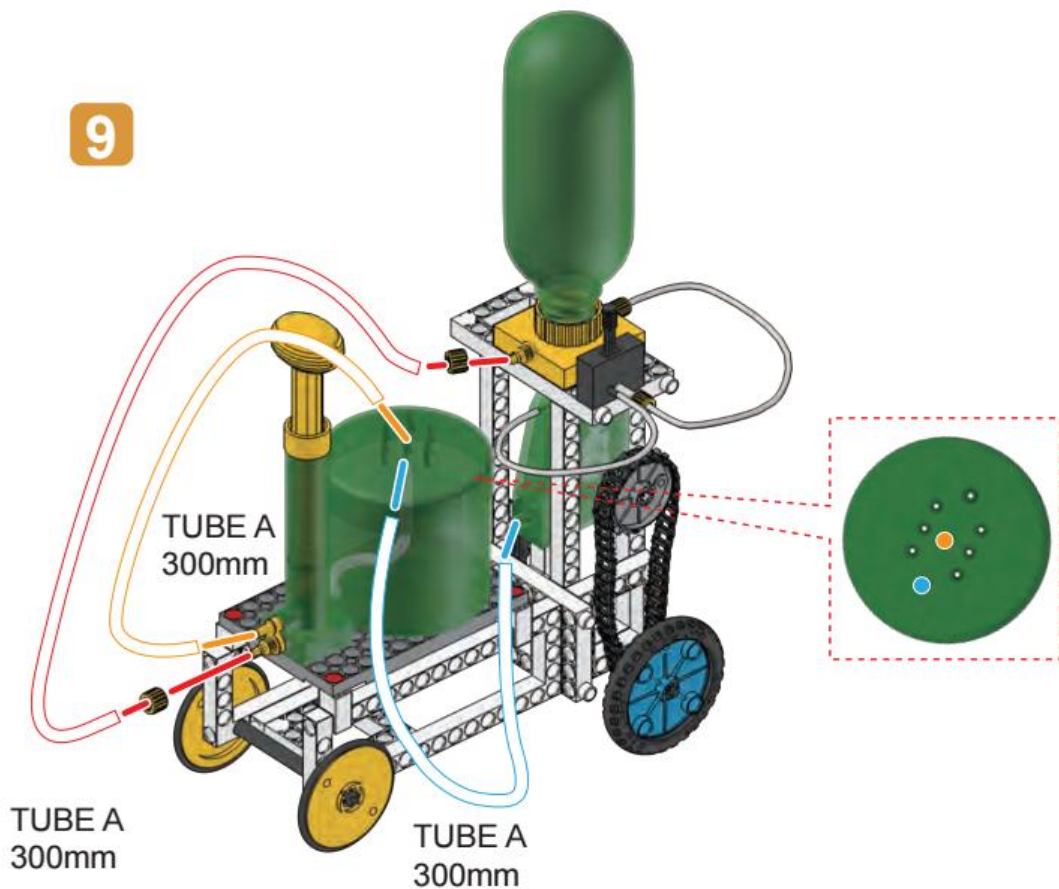
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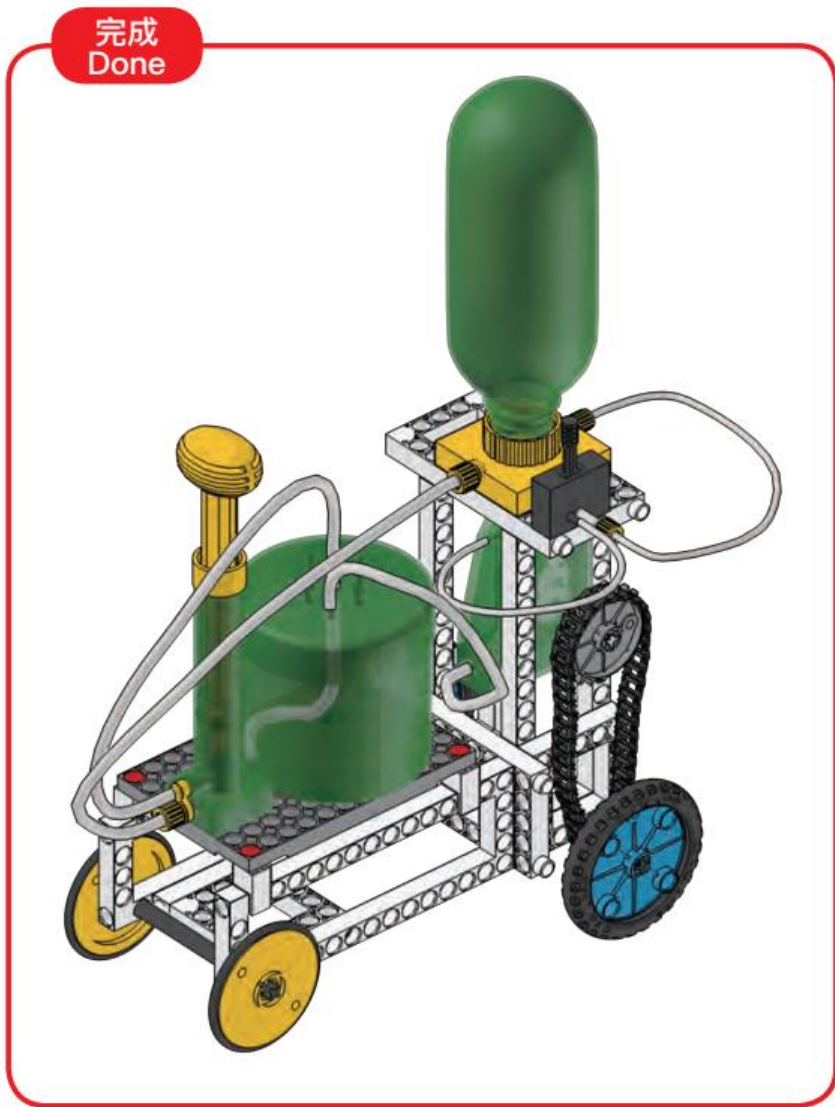
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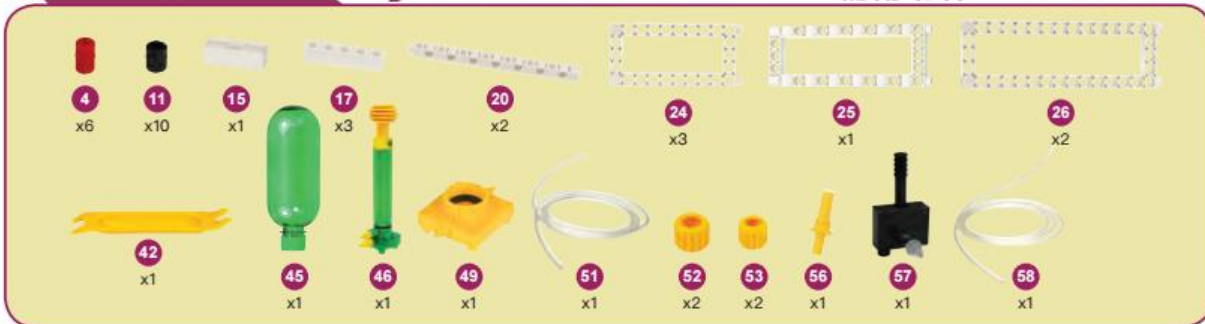


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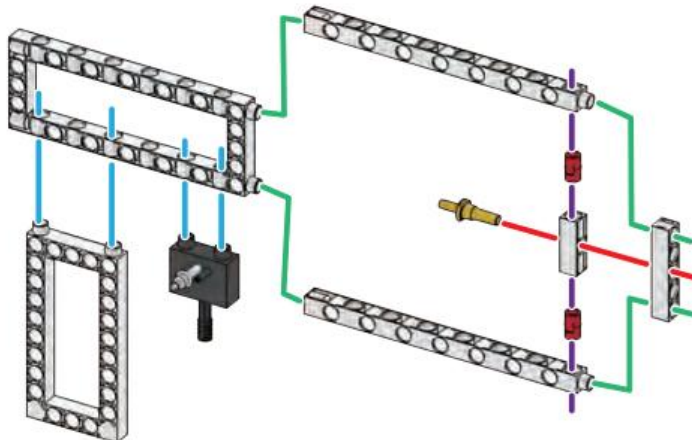


完成  
Done

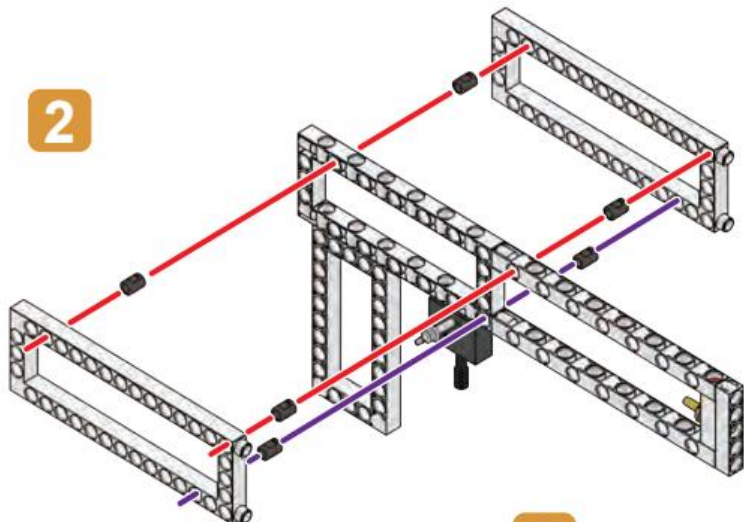




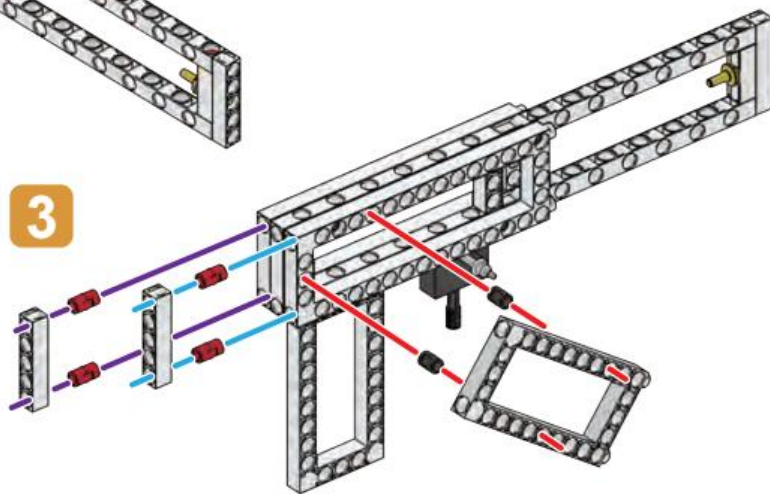
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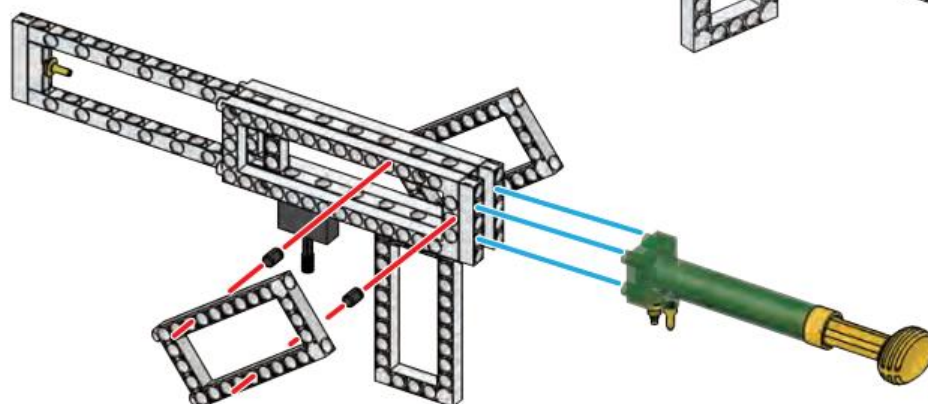
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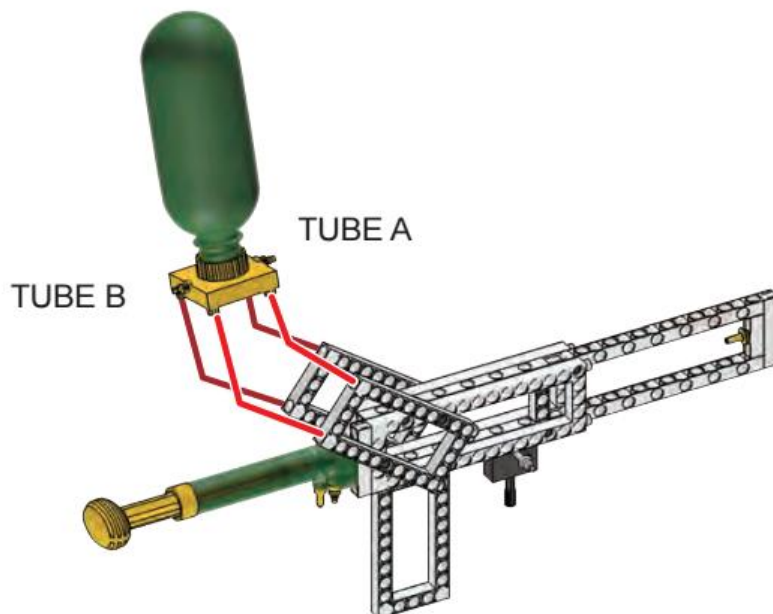
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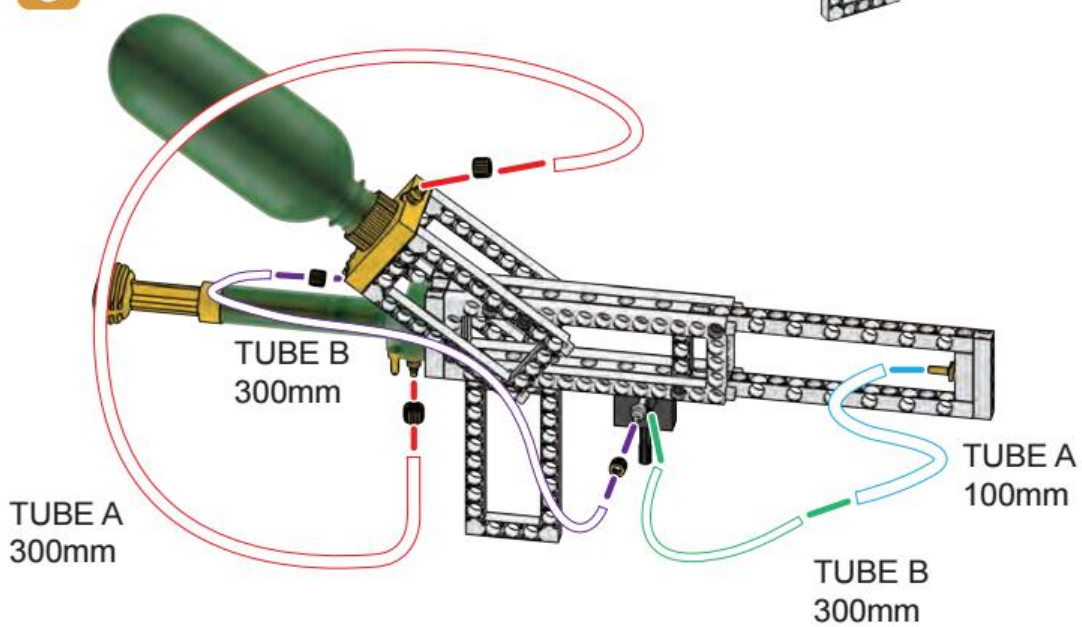
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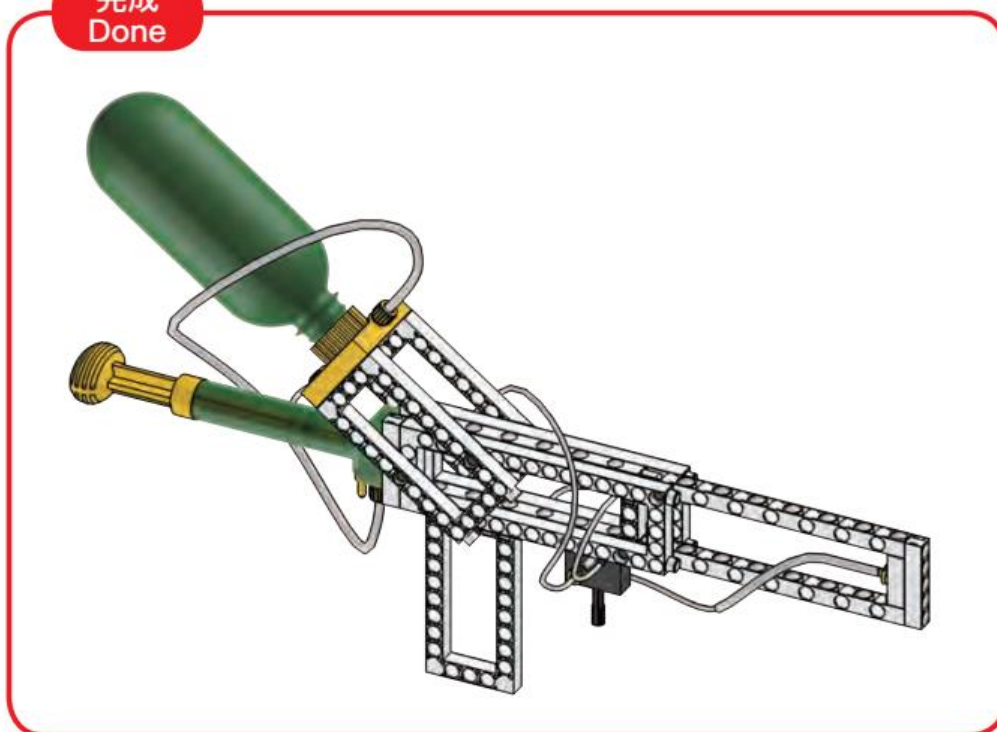
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6



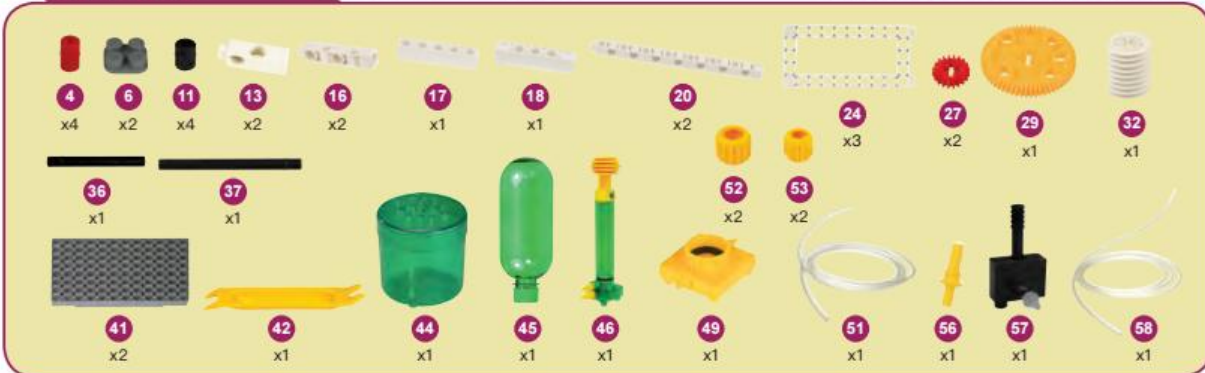
完成  
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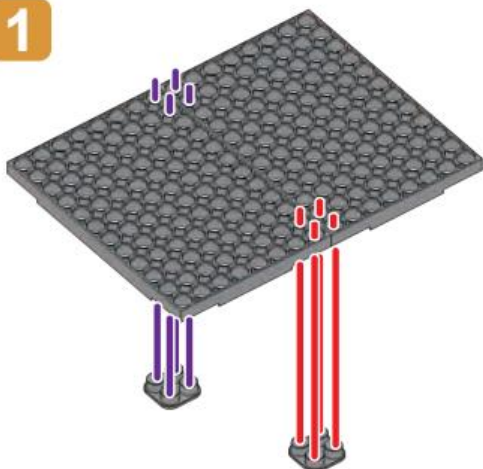
## 高射水砲

## Water Cannon

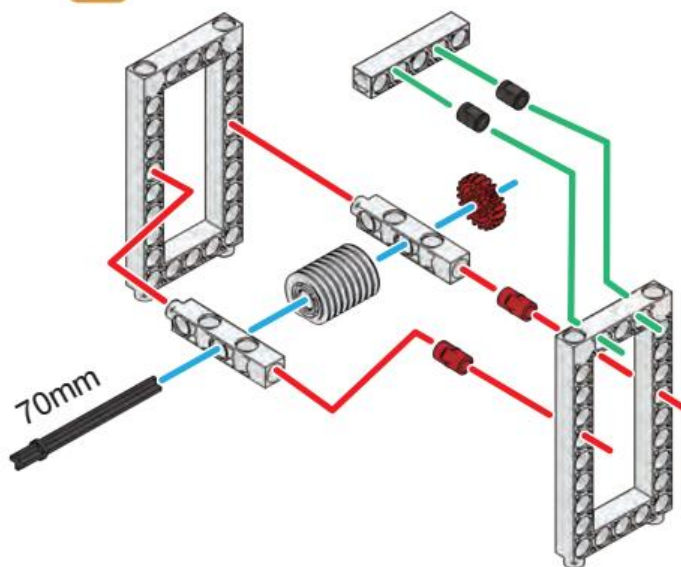
## 需用零件 Parts Needed



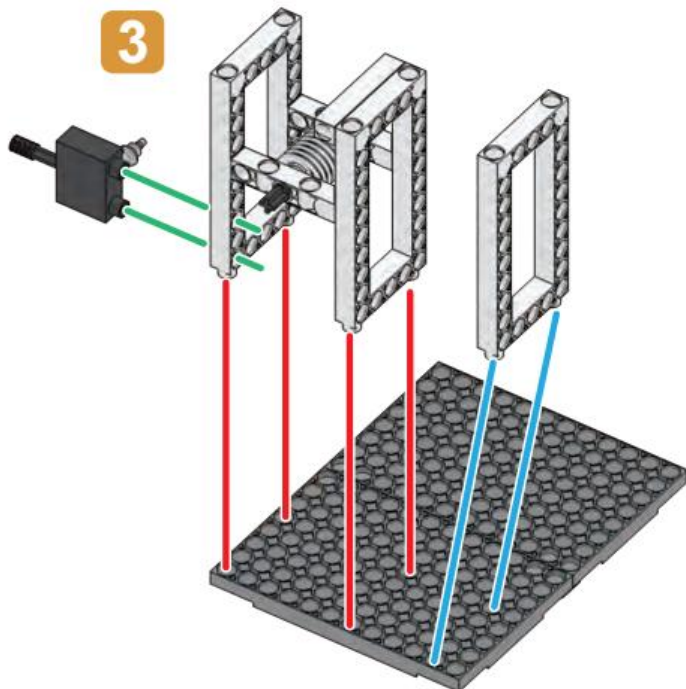
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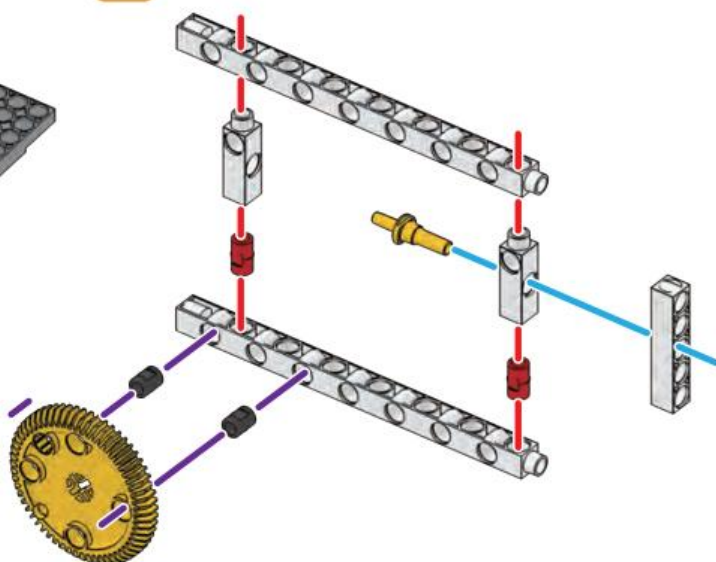
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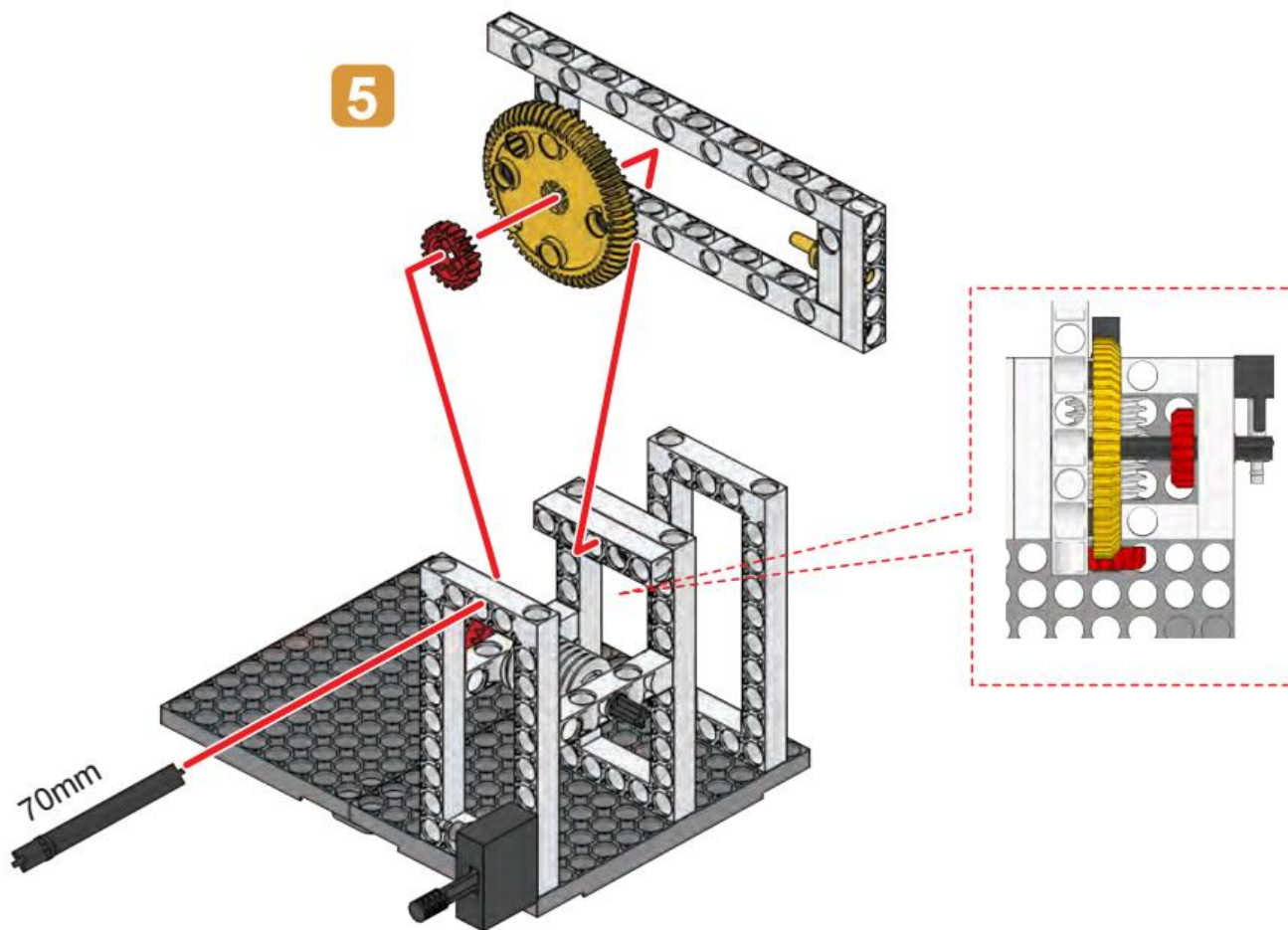


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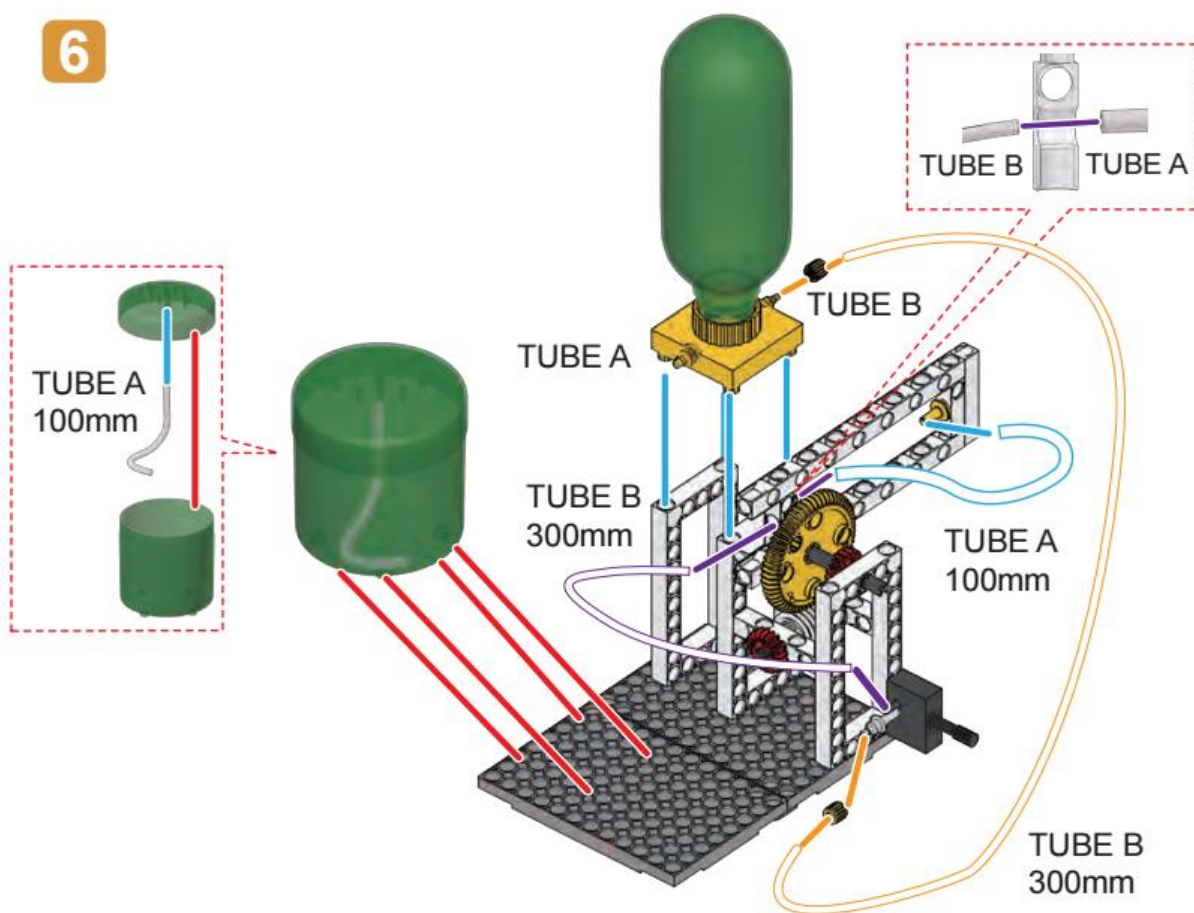




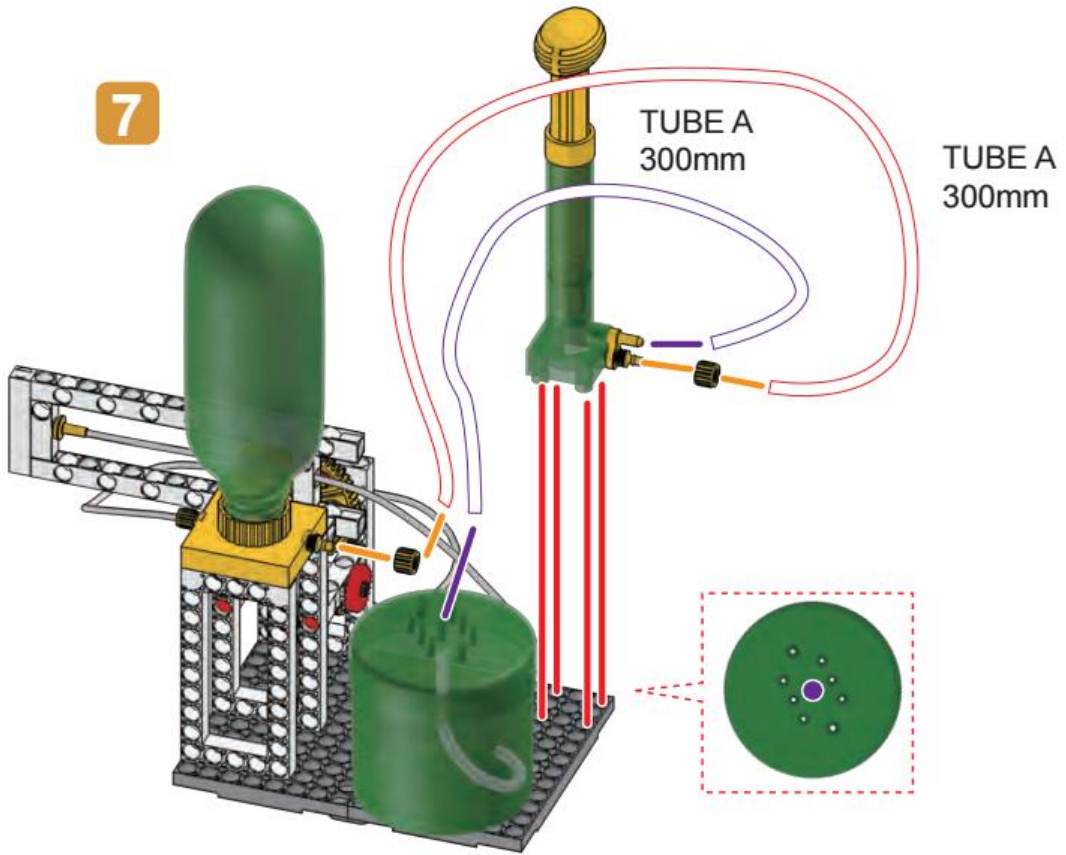
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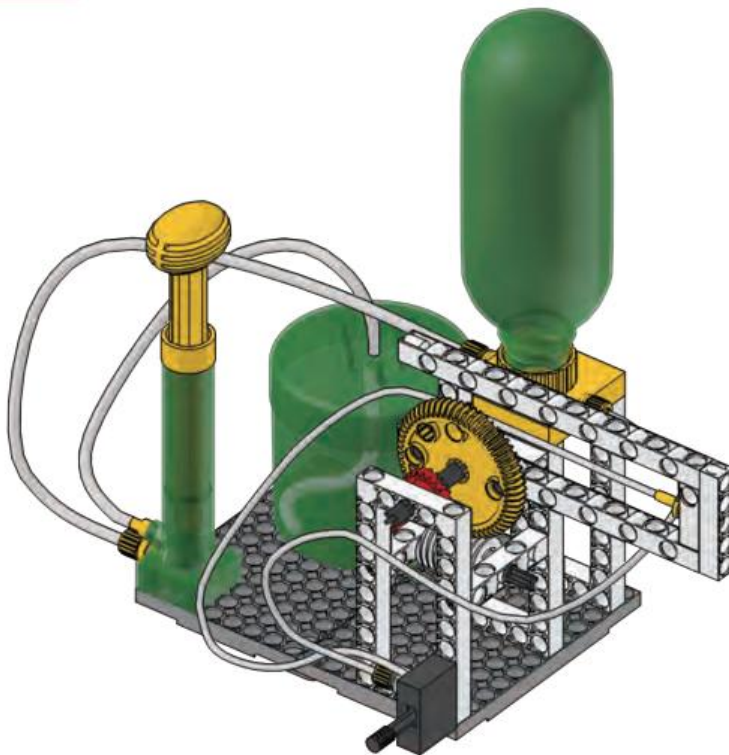
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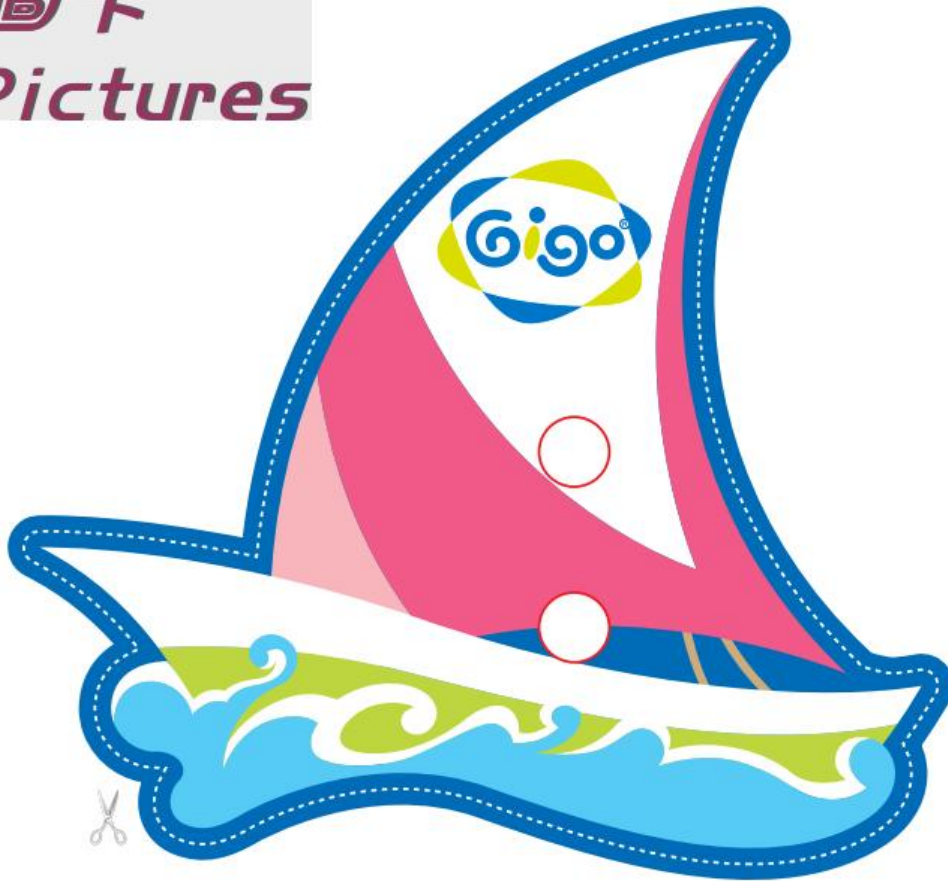
7



完成  
Done



圖卡  
Pictures



◀ 乘風破浪  
Waves Machine



▲ 帆船  
Sailing Ship



# FUN LAB



#1260  
創意積木組  
CREATIVE CUBE



#1261  
科學探索組  
SCIENTIFIC TOUR



#1270  
趣味機關組  
FUN WITH MECHANISM



#1262  
電學補充包  
ELECTRICITY KIT



#1264  
氣動補充包  
PNEUMATICS KIT



#1265  
風力補充包  
WIND POWER KIT



#1266  
水力補充包  
HYDRAULICS KIT



#1267  
太陽能補充包  
SOLAR POWER KIT



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