

GE-737



科學玩具

MAKING • LEARNING • PLAYING



Assembly & Instruction

Manual

組裝說明手冊

手作樂趣・科學玩具

MAKING LEARNING PLAYING

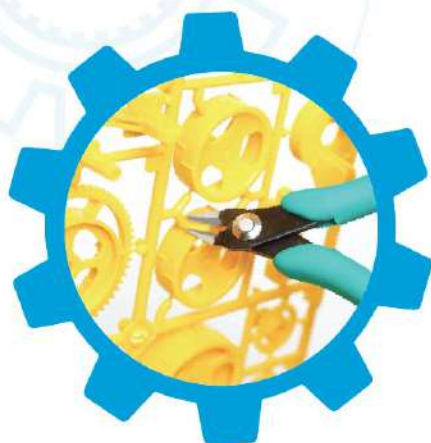
台灣製造・專利研發・無毒環保

科學玩具行銷全球 20 餘國，擁有歐、美、日、澳、中國、台灣…等多國專利註冊，符合世界級的STEM教育專業組織STEM.org的認證、台灣ST玩具、中國 CCC 等各國安全認證，專業研發獲得國際多項殊榮。結合科學原理，DIY實做、模型美學，啟發孩童想像力與創造力，是玩具也是教具，組模型也組思緒。

三倍樂趣 創客養成推薦

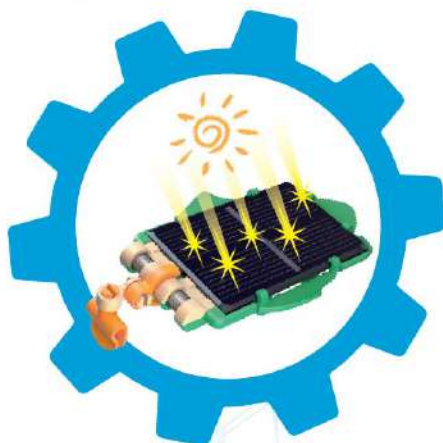


榮獲STEM.org
國際認證



沈浸模型組裝

科學動力應用



AI邏輯探索

科學動力



電池動力



療癒小寵



教學編程



競技遊戲



模型收藏

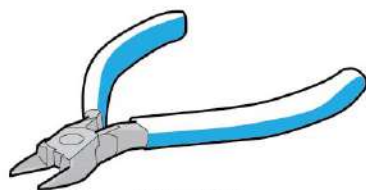


太陽能永生花

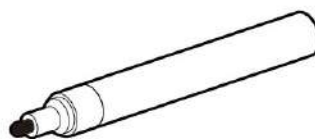
目錄 Contents

自備工具 Tools You May Need	1
零件清單 Mechanical Parts List	1
塑膠模型零件 Plastic Parts	2
小技巧提醒 Read it Before Assembly	3
產品簡介 Product introduction	4
吸盤組裝 Suction Cup Assembly	5
太陽能模組組裝 Solar Module Assembly	5
齒輪箱組裝 Gear Box Assembly	6
花蕊組裝 Pistil Module Assembly	8
兔寶科學小學堂 TuBao' s Science Classroom	11
花瓣組裝 Petal Module Assembly	12
花梗組裝 Stalk Module Assembly	15
花瓶夾具組裝 Vase Clip Assembly	15
遊玩方式 How to Play	16
趣味玩法Funway 1	19
趣味玩法Funway 2	20
創意玩法Creative Play Ideas	22
注意事項 Warning	23

自備工具 Tools You May Need



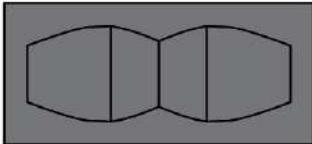
斜口鉗
Diagonal Cutter



麥克筆(細)
Marker Pen (Fine)

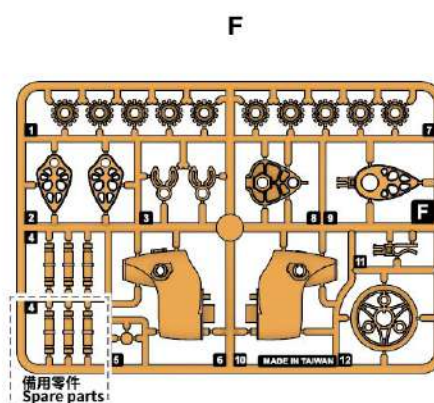
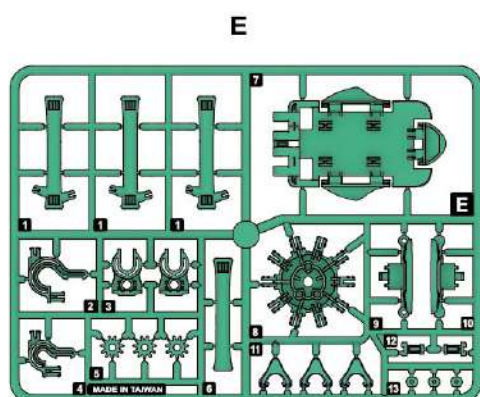
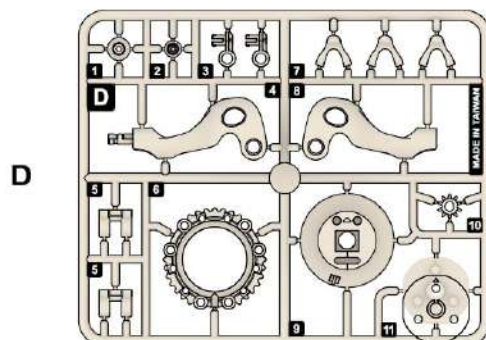
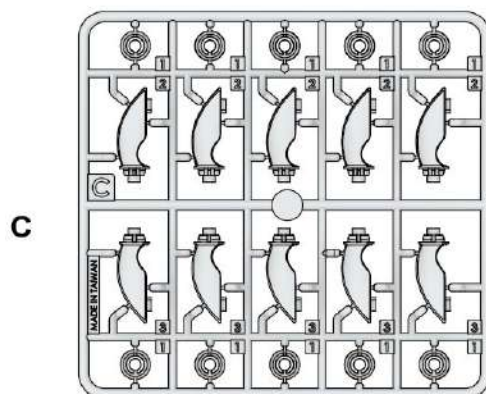
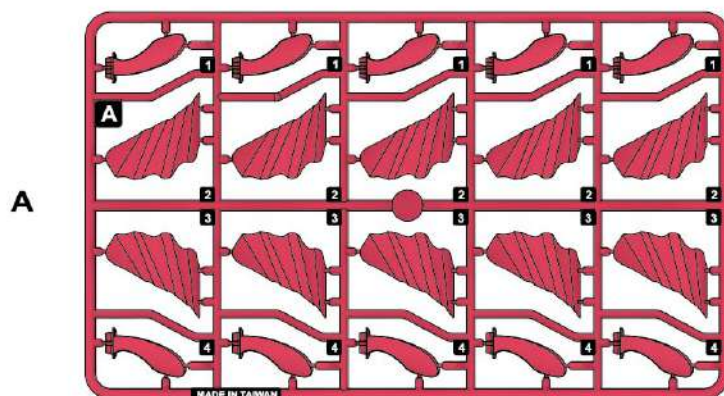
零件清單 Mechanical Parts List

! 部分產品有銳利邊角, 組裝時請特別注意。
Product contains functional edges and sharp points.

P1	齒輪 36/10T (透明) Gear 36/10T (Transparent)	P2	齒輪 44/10T(綠色) Gear 44/10T(Green)	P3	帶軸齒輪 Gear with Shaft
					
1 pc		1 pc		2 pcs	
P4	圓軸 Round Shaft		P5	吸盤 Suction Cup	
					
1 pc			1 pc		
P6	海綿 Sponge		P7	帶彈簧太陽能板 Solar Panel with Springs	
					
1 pc			1 pc		
P8	帶接頭馬達 Motor with Connectors				
					
1 pc					

塑膠模型零件 Plastic Parts

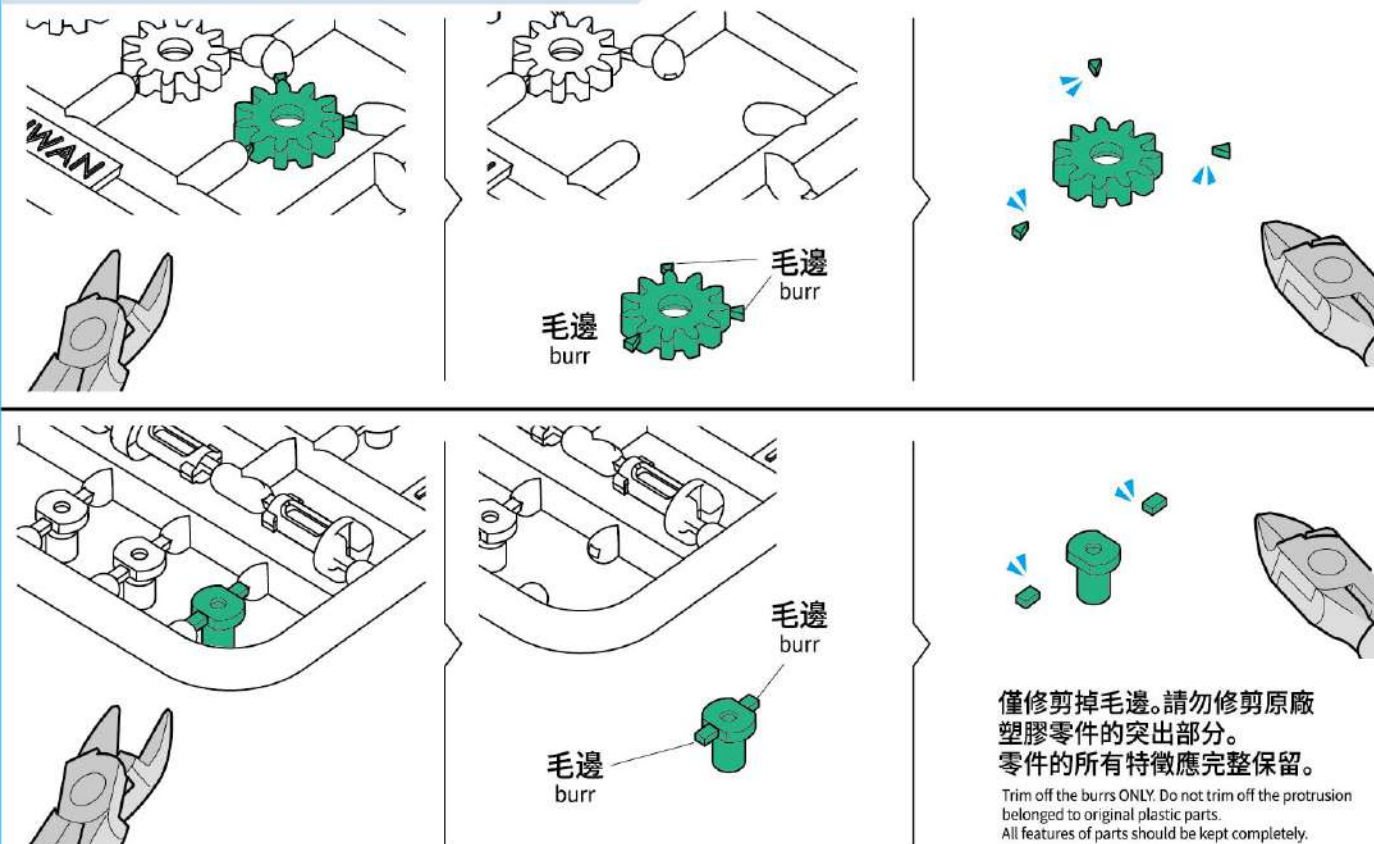
! 請依照組裝步驟將所需的零件剪下，請勿提早剪下零件，以免混淆。
Cut the plastic parts when they are required. Do not cut them in advance.



小技巧提醒 Read it Before Assembly

請詳讀以下組裝小技巧 Please read through and follow the tips below before assembly.

請將毛邊修剪乾淨 Remove burrs



請勿使用以下方式 Please do not



用剪刀剪
Cut with scissors



用手擰
Twist it with your hand



用剪切後會留毛邊的手鉗
The cutter which leaves burrs



建議使用專業模型鉗
Suggest using model cutters



PM-200



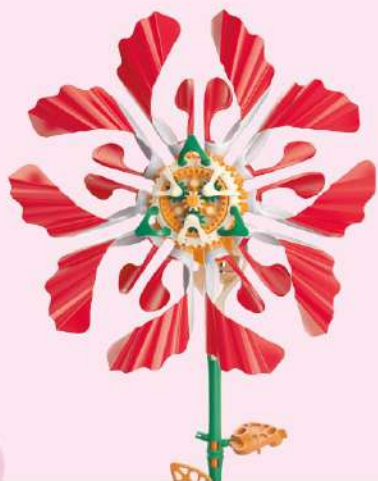
PM-202



PM-203

零件剪壞了Don't worry! 進入官網頁面依流程提交補配件申請。
Free replacement service for the broken parts or accessories.





太陽能永生花

Dancing Bloom Solar Perpetual

產品介紹 Product introduction

太陽能永生花就是一朵會隨陽光而舞動的神奇小花，不需要電池、不用插電，只靠陽光就能動起來。太陽能板收集光線並轉換成能量，帶動小馬達與齒輪，讓花瓣慢慢旋轉，就像真的花兒朝著太陽生長一樣。

組裝過程非常簡單，不需要螺絲也不用黏膠，只要一把剪鉗就能完成。在組裝的過程中，你會了解光如何轉化成動力，體驗到原來科學能這麼美、有創意又療癒！你可以把太陽能板裝在花上，或用吸盤固定在窗戶上，調整角度找到最好的陽光照射位置即可。

完成後，把花放進花瓶或窗台上，陽光灑落，它就會優雅地旋轉，就像一株真正花朵迎向太陽。準備好用太陽的能量，開啟你的創意了嗎？現在就開始，打造一朵屬於你自己的太陽能永生花吧！

The Dancing Bloom Solar Perpetual is a charming little flower that comes to life under sunlight. It needs no batteries and no cables—just the power of the sun. The solar panel collects light and turns it into energy, which drives a small motor and gears that gently rotate the petals, just like a real flower reaching for the sun.

Assembly is simple and fun. No screws, no glue—just a pair of cutters is all you need. While putting it together, you'll see how sunlight transforms into movement and discover that science can be creative, beautiful, and even relaxing. You can place the solar panel directly on the flower or attach it to a window with the suction cup, adjusting the angle to catch the brightest sunlight.

Once you're done, set your flower in a vase or on a windowsill. When sunlight shines on it, the petals will spin gracefully, like a real blossom turning toward the light. Ready to create with the power of the sun? Build your own Dancing Bloom Solar Perpetual and let your imagination bloom!

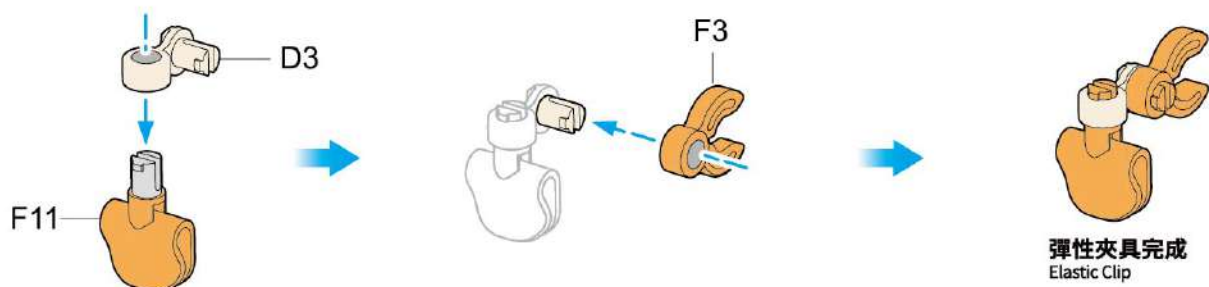


讓我們開始組裝吧！
Let's start assembling~

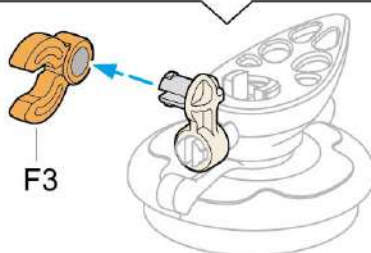
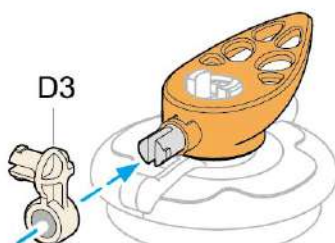
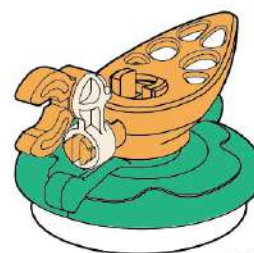
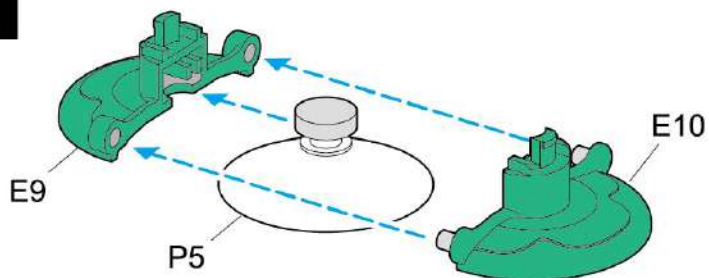


吸盤組裝 Suction Cup Assembly

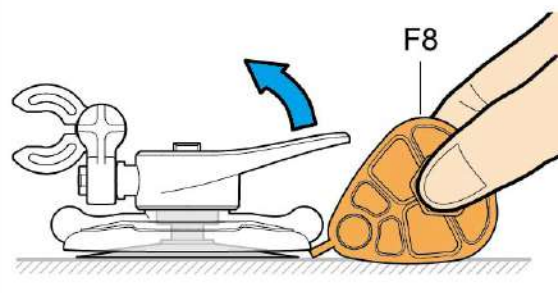
1



2

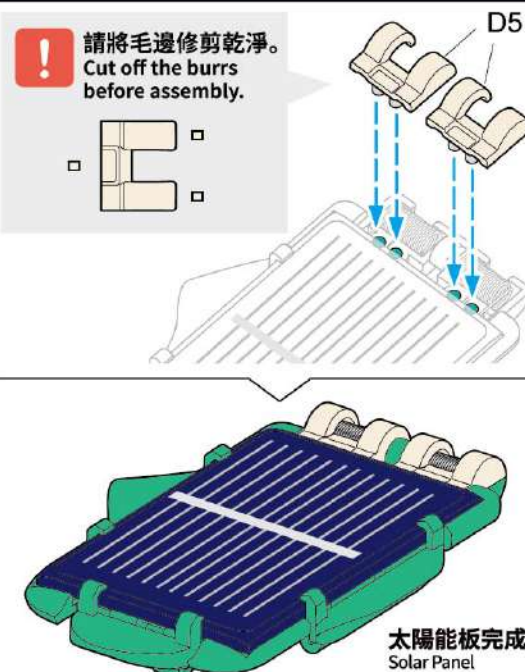
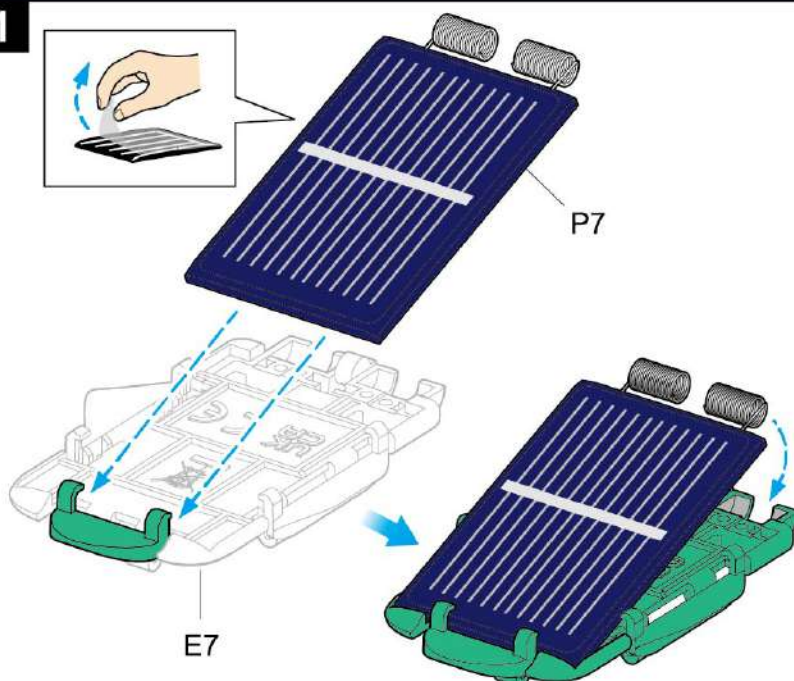


如果吸盤吸附在桌面上, 請使用零件F8來推動釋放。
If the suction cup sticks to the table, use the F8 to push and release it.



太陽能模組組裝 Solar Module Assembly

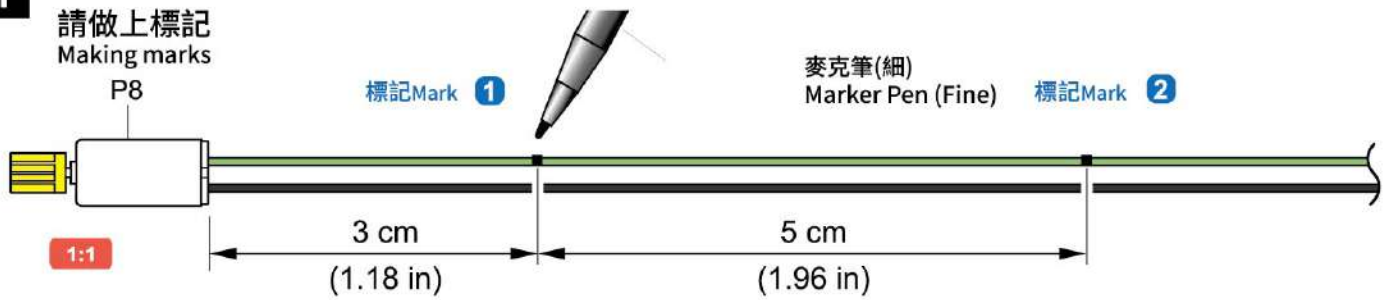
1



齒輪箱組裝 Gear Box Assembly

1

請做上標記
Making marks

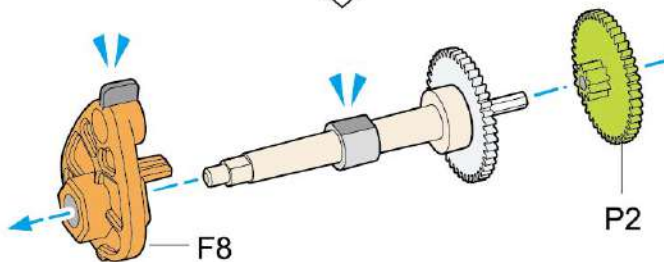
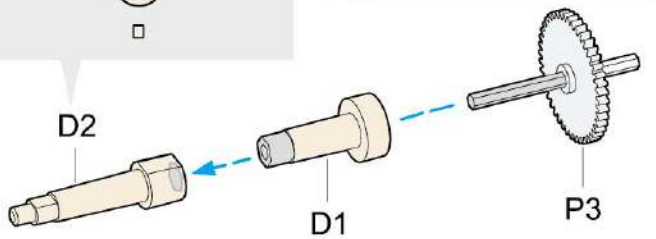


2

! 請將毛邊修剪乾淨。
Cut off the burrs before assembly.

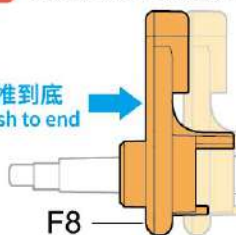


錯誤
Incorrect

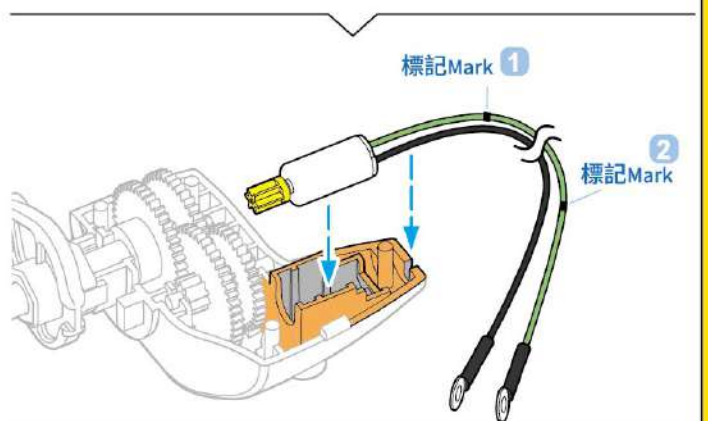
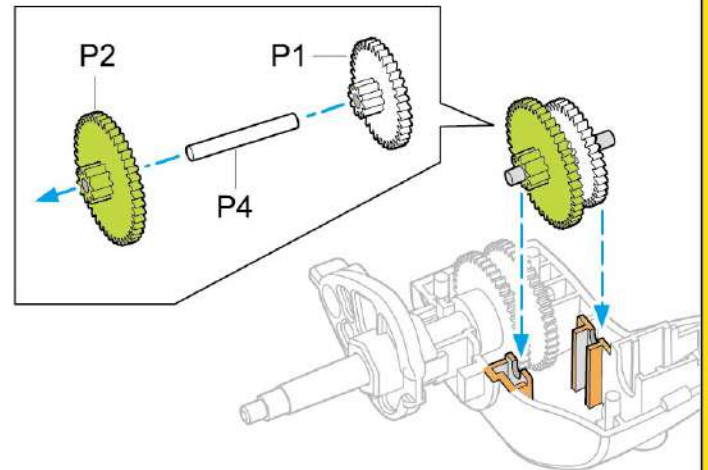
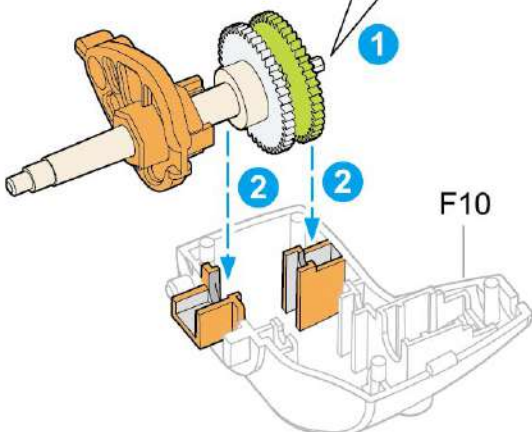
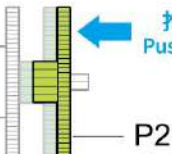


! 請將F8與P2完全推到底
Push F8 and P2 all the way in.

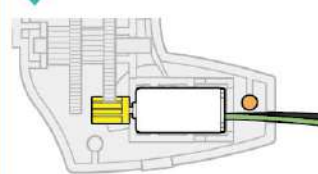
推到底
Push to end



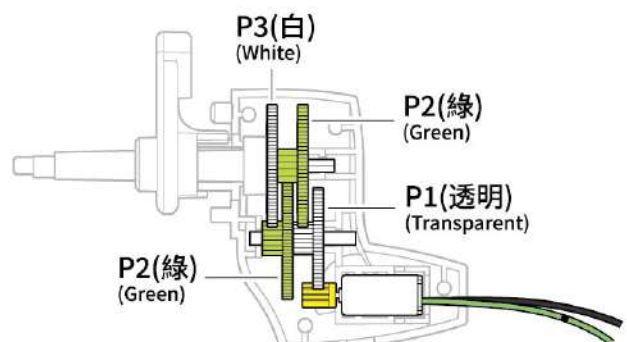
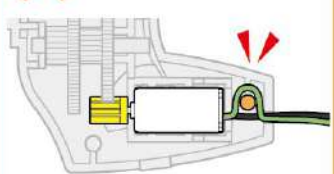
推到底
Push to end



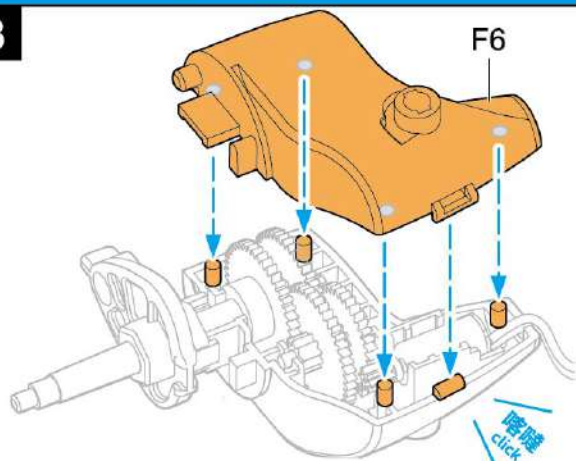
正確Correct



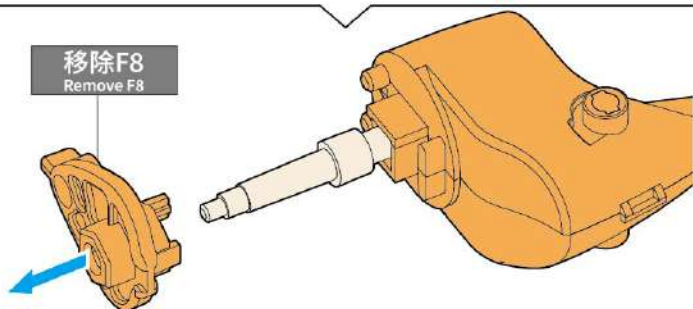
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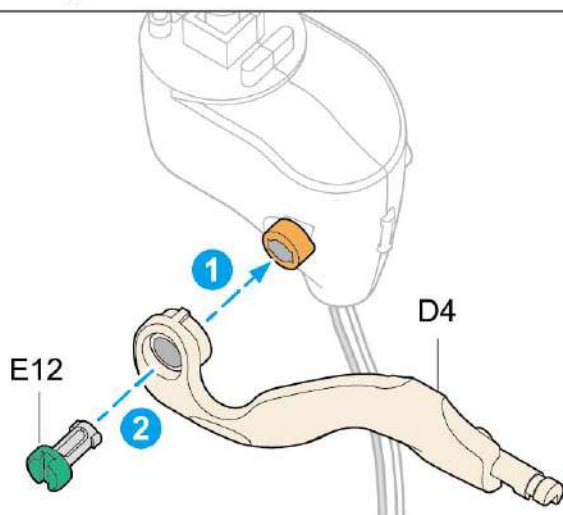
3



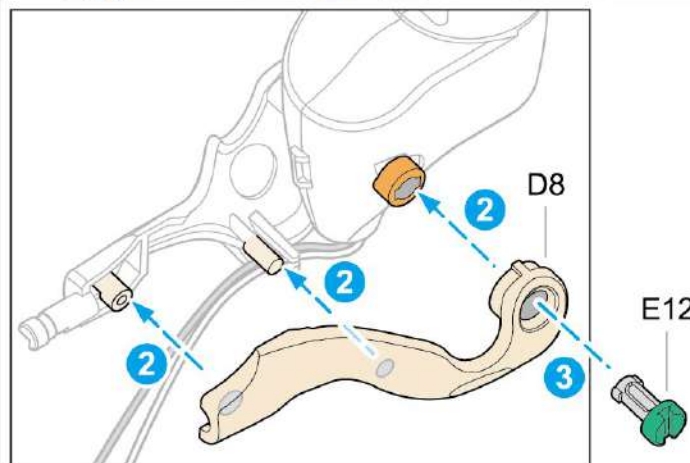
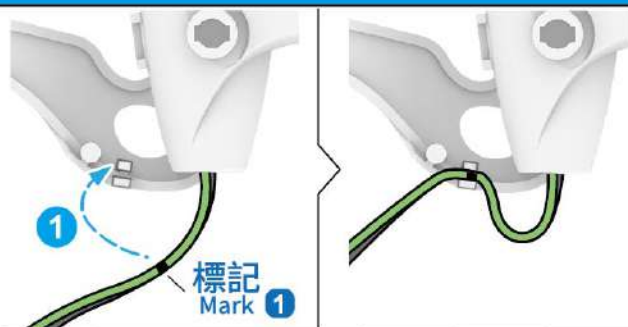
移除F8
Remove F8



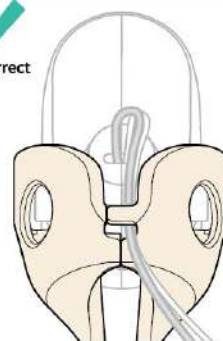
4



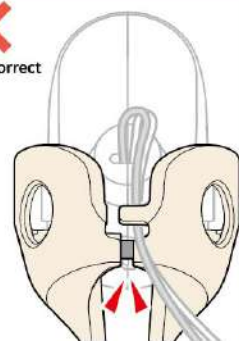
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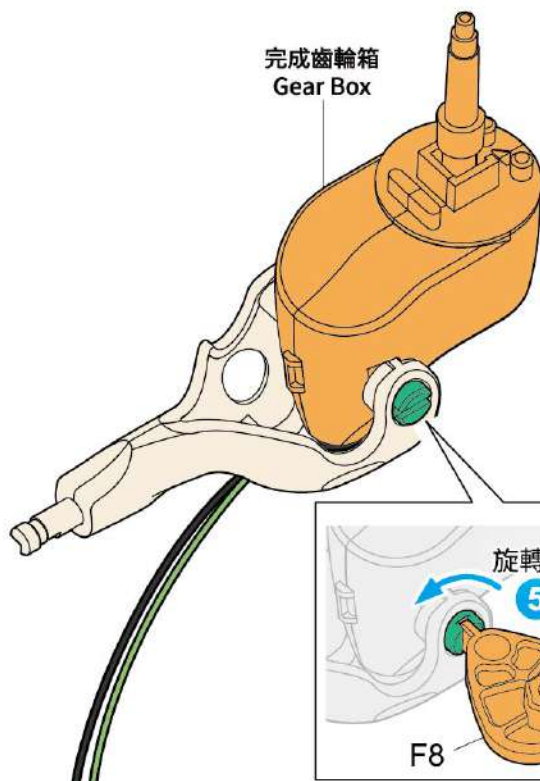
正確 Correct



錯誤 Incorrect



完成齒輪箱
Gear Box



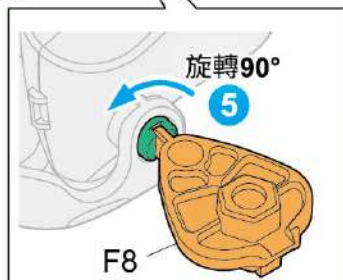
旋轉90°

3



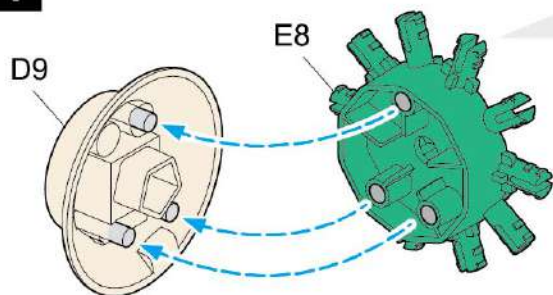
旋轉90°

5

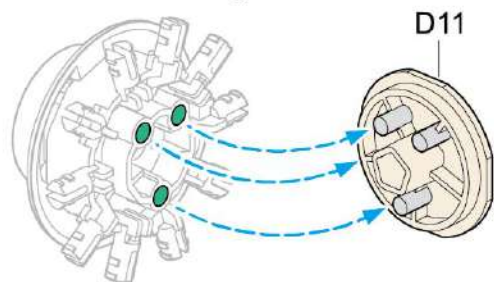
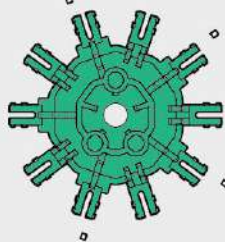


花蕊組裝 Pistil Module Assembly

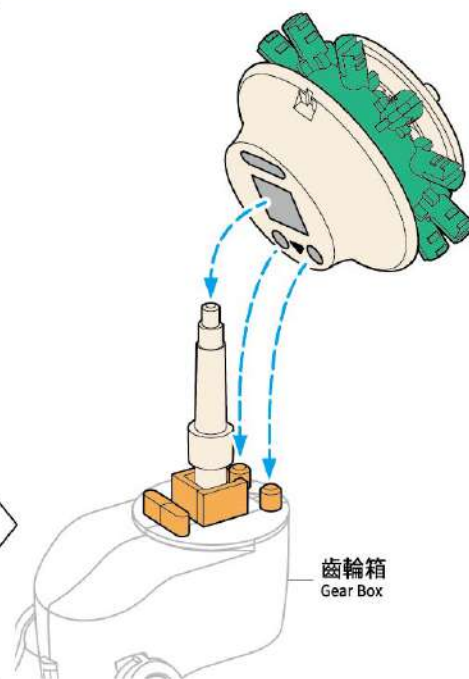
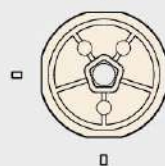
1



請將毛邊修剪乾淨。
Cut off the burrs before assembly.



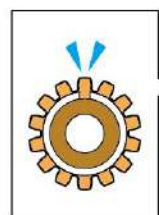
請將毛邊修剪乾淨。
Cut off the burrs before assembly.



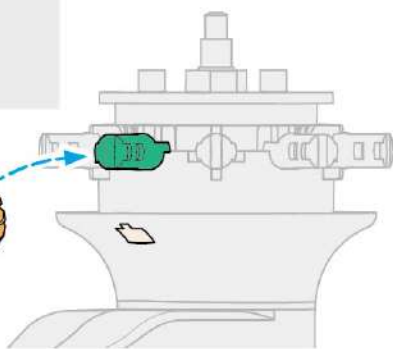
2



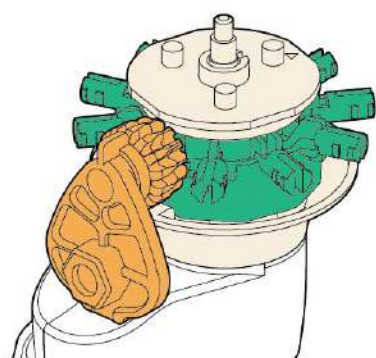
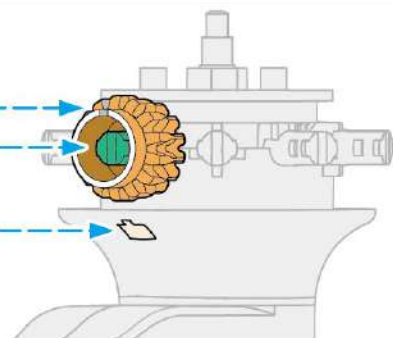
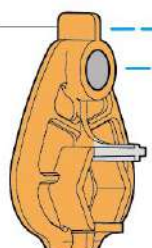
請將毛邊修剪乾淨。
Cut off the burrs before assembly.



F1



F8



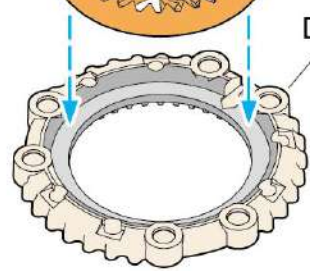
3



請將毛邊修剪乾淨。
Cut off the burrs before assembly.



F12



D6

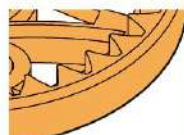


翻轉 F12, 檢查是否能順暢旋轉。
Flip F12 to check if it spins smoothly.

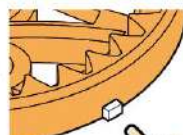
如果轉動不順暢, 請檢查並修整任何粗糙的邊緣。
If it does not spin well, check and trim any rough edges.



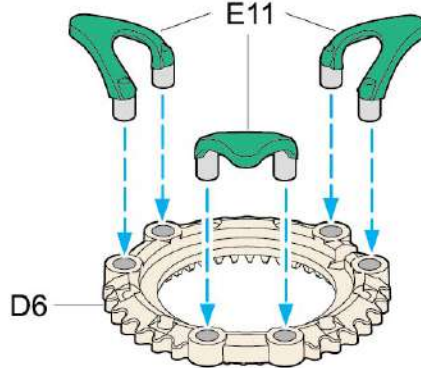
正確 Correct



錯誤 Incorrect



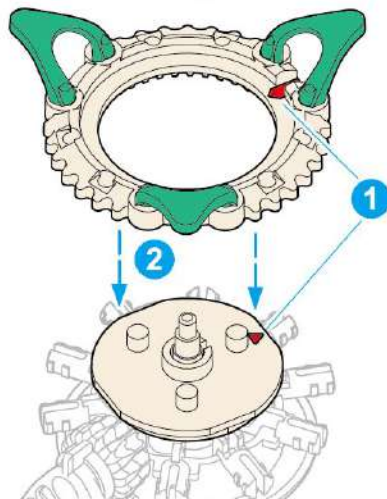
4



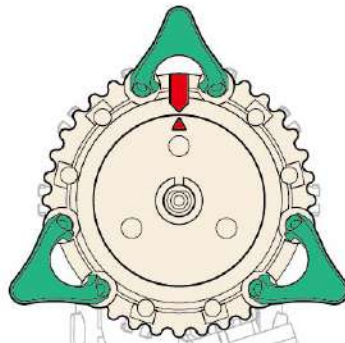
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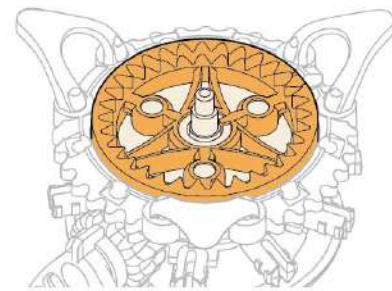
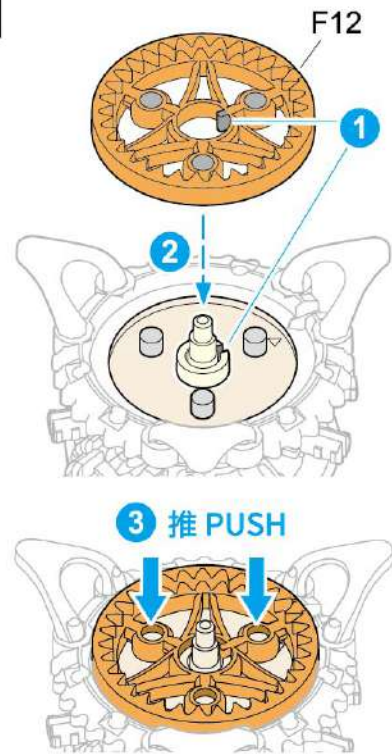
錯誤 Incorrect



檢查箭頭是否對齊。
Check if the arrows are aligned.



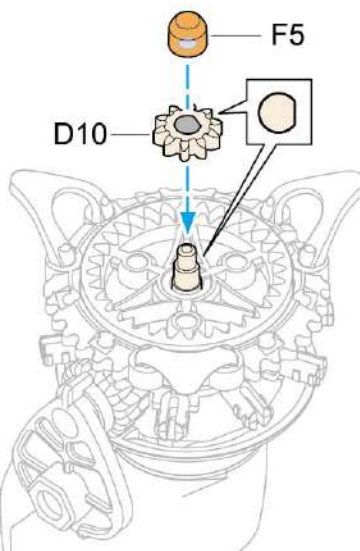
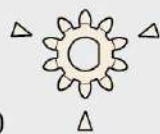
5



6



請將毛邊修剪乾淨。
Cut off the burrs before assembly.



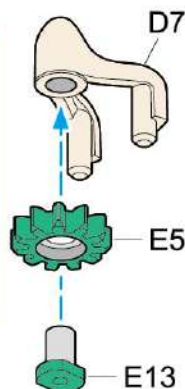
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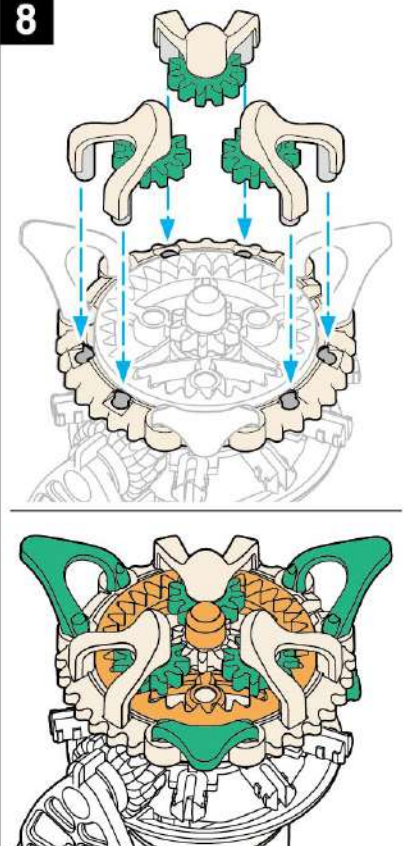
請將毛邊修剪乾淨。
Cut off the burrs before assembly.



錯誤 Incorrect



8

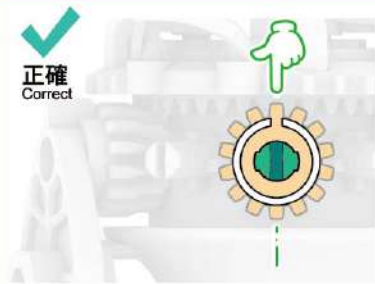


9

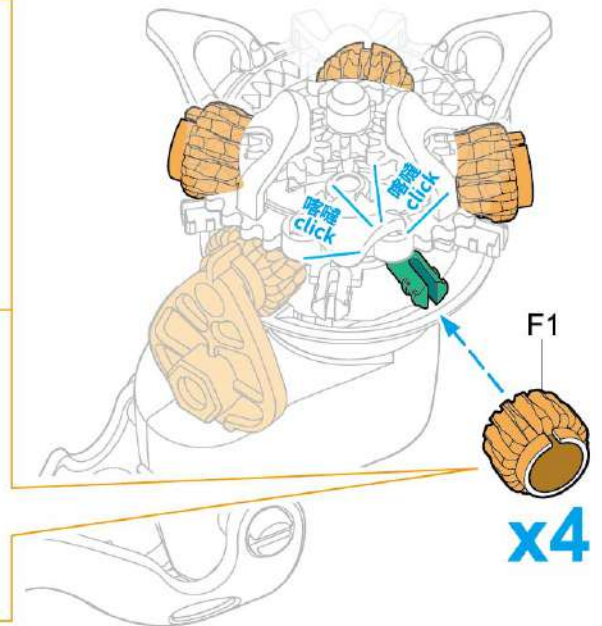
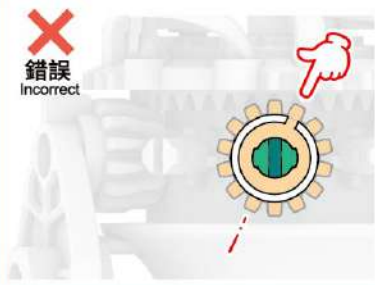
! 請將毛邊修剪乾淨。
Cut off the burrs before assembly.



✓
正確
Correct

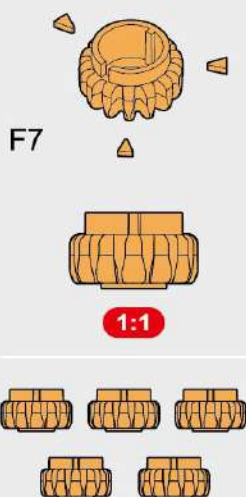


✗
錯誤
Incorrect

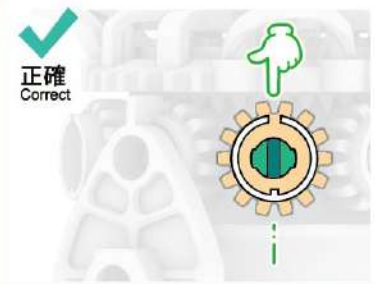


10

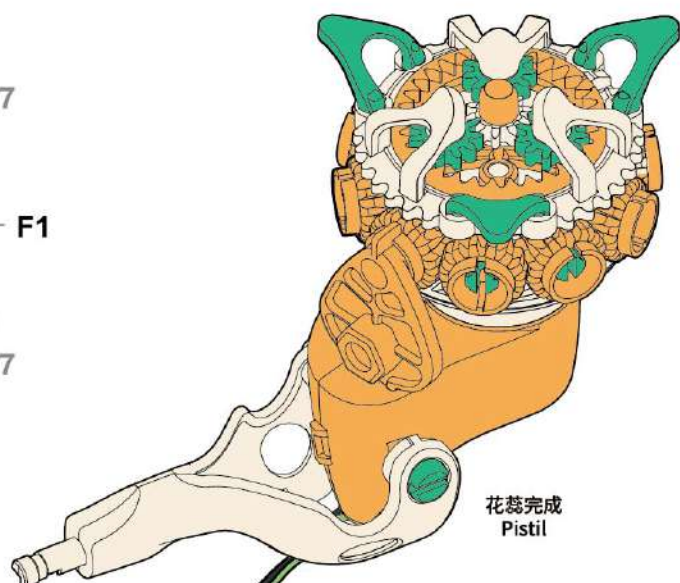
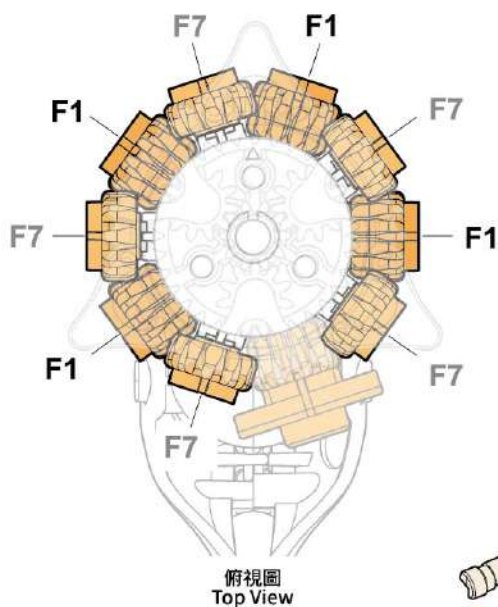
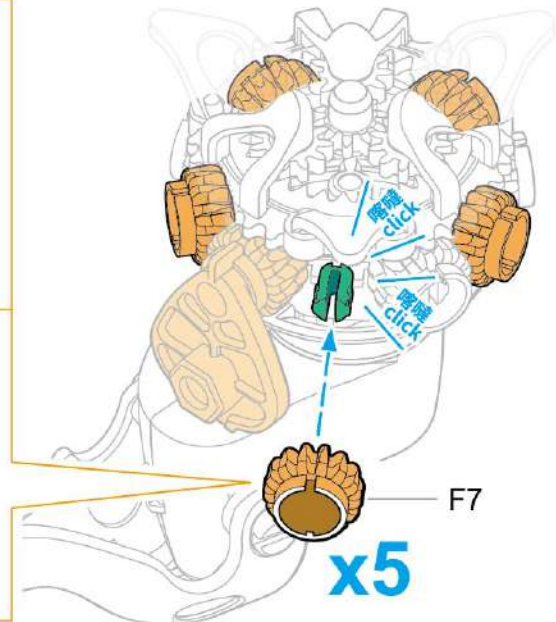
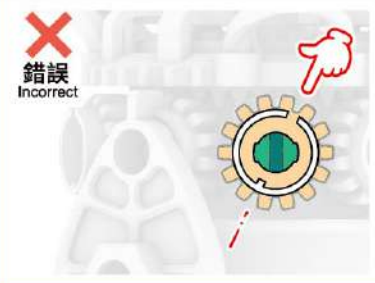
! 請將毛邊修剪乾淨。
Cut off the burrs before assembly.



✓
正確
Correct



✗
錯誤
Incorrect





兔寶科學小學堂



太陽能原理

1. 接收足夠能量的光

足夠能量的光子激發太陽能版的矽原子而產生自由電子(負電)與電洞(正電)。

2. 電子移動，電來了

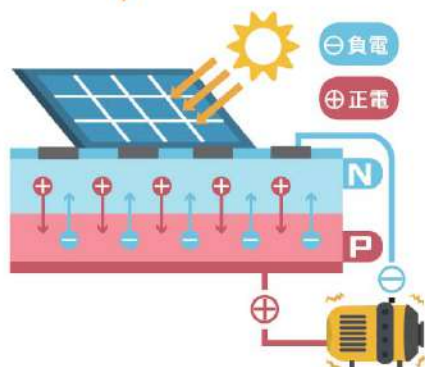
正、負電會分別往正(P型)、負(N型)極方向移動，從而產生電流。

3. 馬達驅動，開始玩吧！



太陽光不足時
可用強光手電筒代替

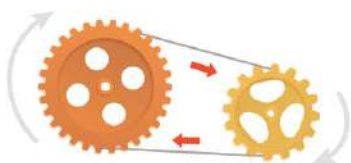
太陽能發電面板搜集太陽熱能，轉化為電能。
吸收 300NM ~ 1100NM 波長的太陽光，光子能量激發矽原子產生正負電，在半導體上產生了電子移動。電來了，就發動了！



機械動力

傳動裝置

同方向運轉傳遞動力



改變運轉速度

大齒輪，速度慢
但有力

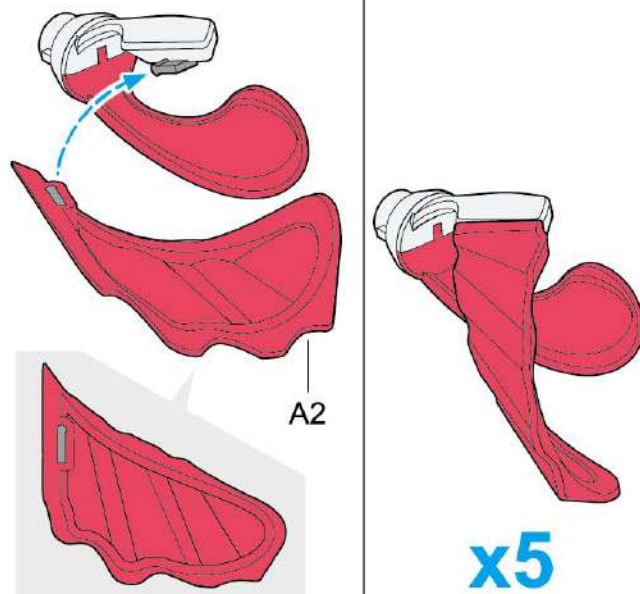
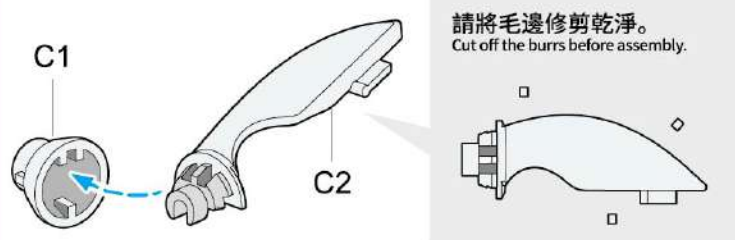


改變運動方向

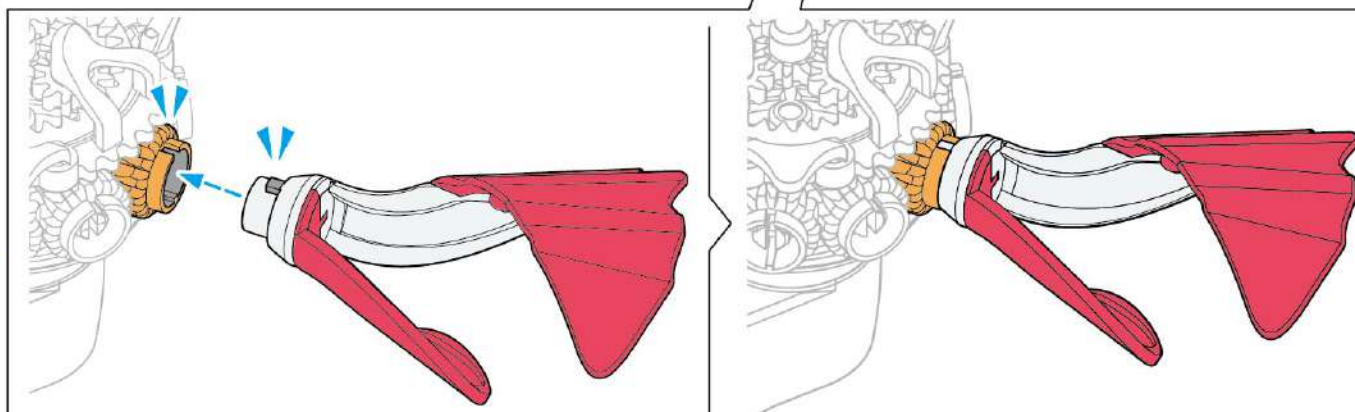
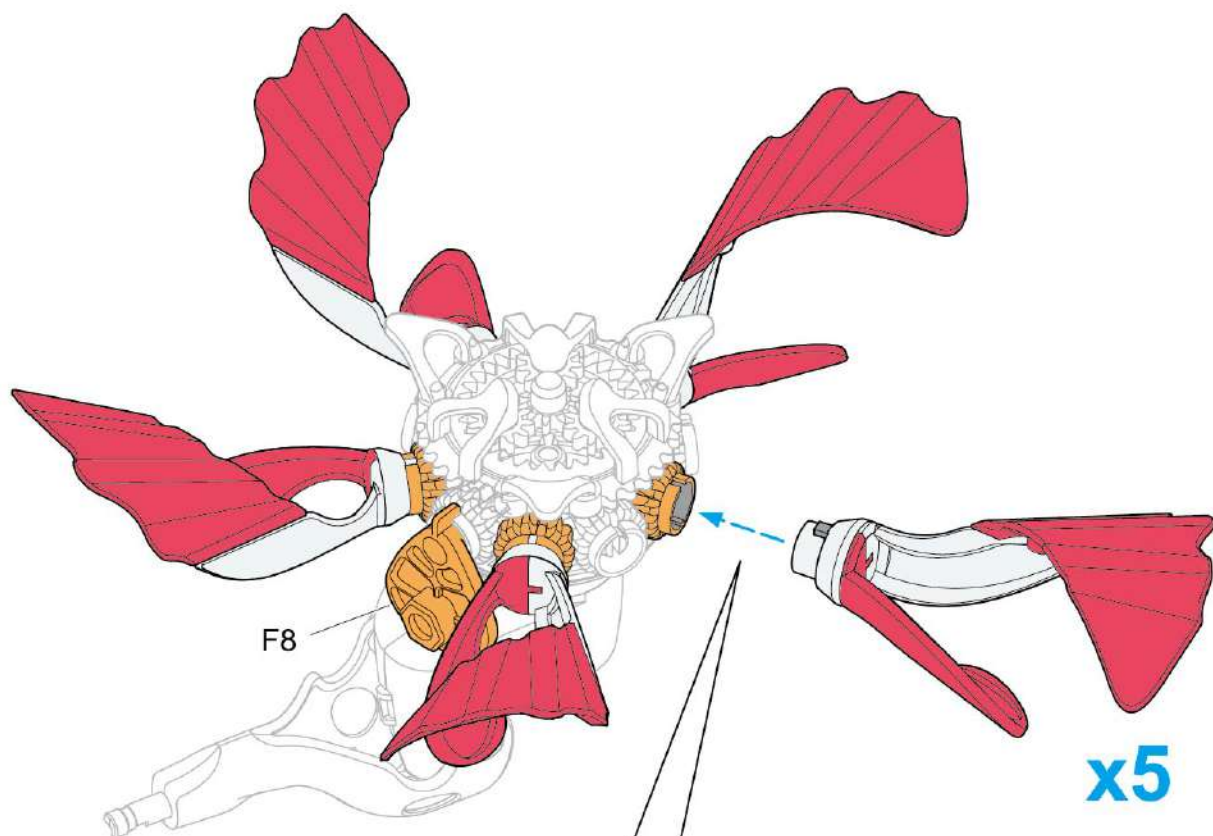
利用齒輪間的連接來傳遞動力，而當大、小齒輪互相扣在一起時，轉動其中一個齒輪，另一個齒輪就會以反方向跟著轉動，透過方向與速度讓機械運轉得更順暢。

花瓣組裝 Petal Module Assembly

1

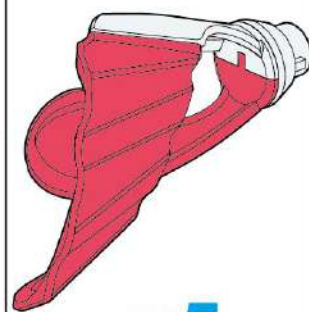
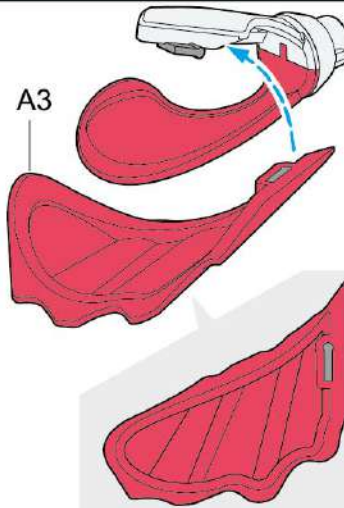
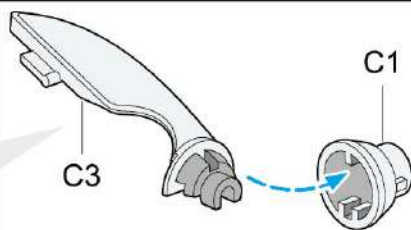
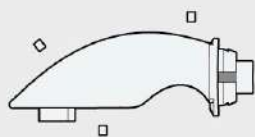


2



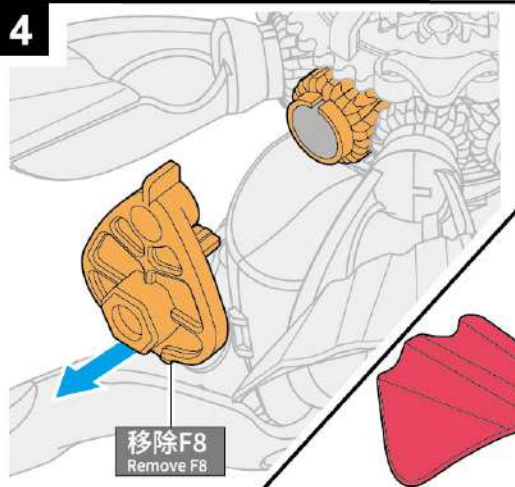
3

請將毛邊修剪乾淨。
Cut off the burrs before assembly.



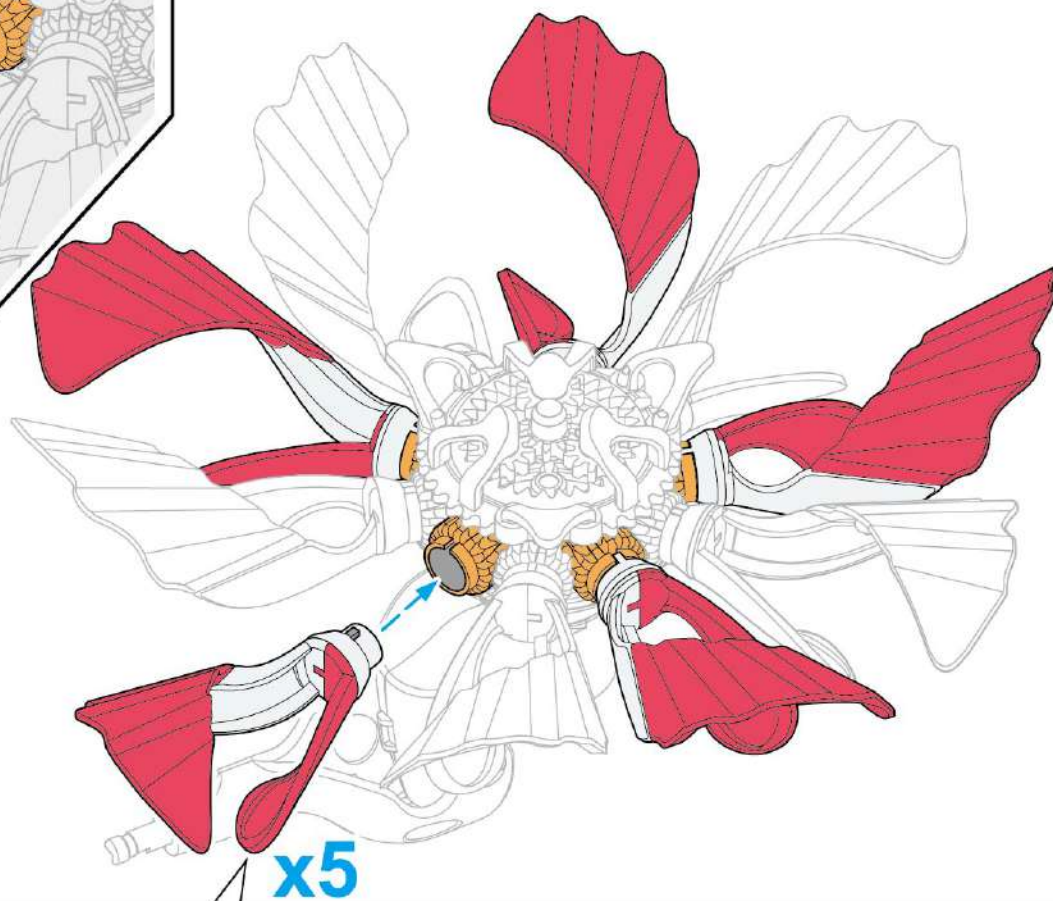
x5

4

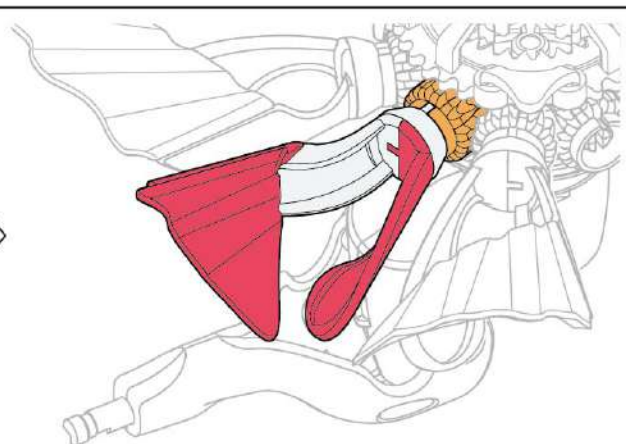
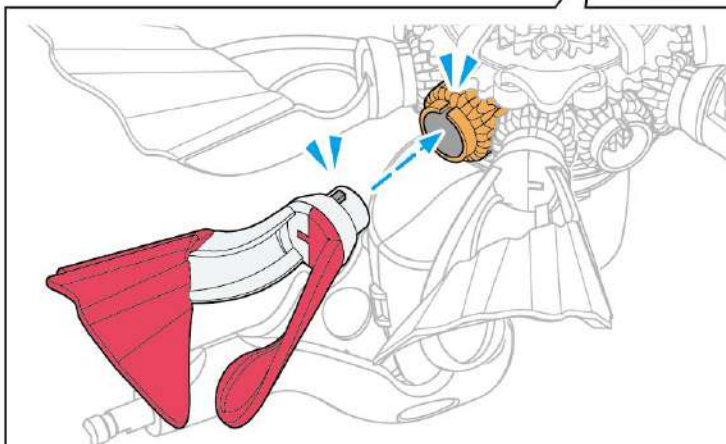


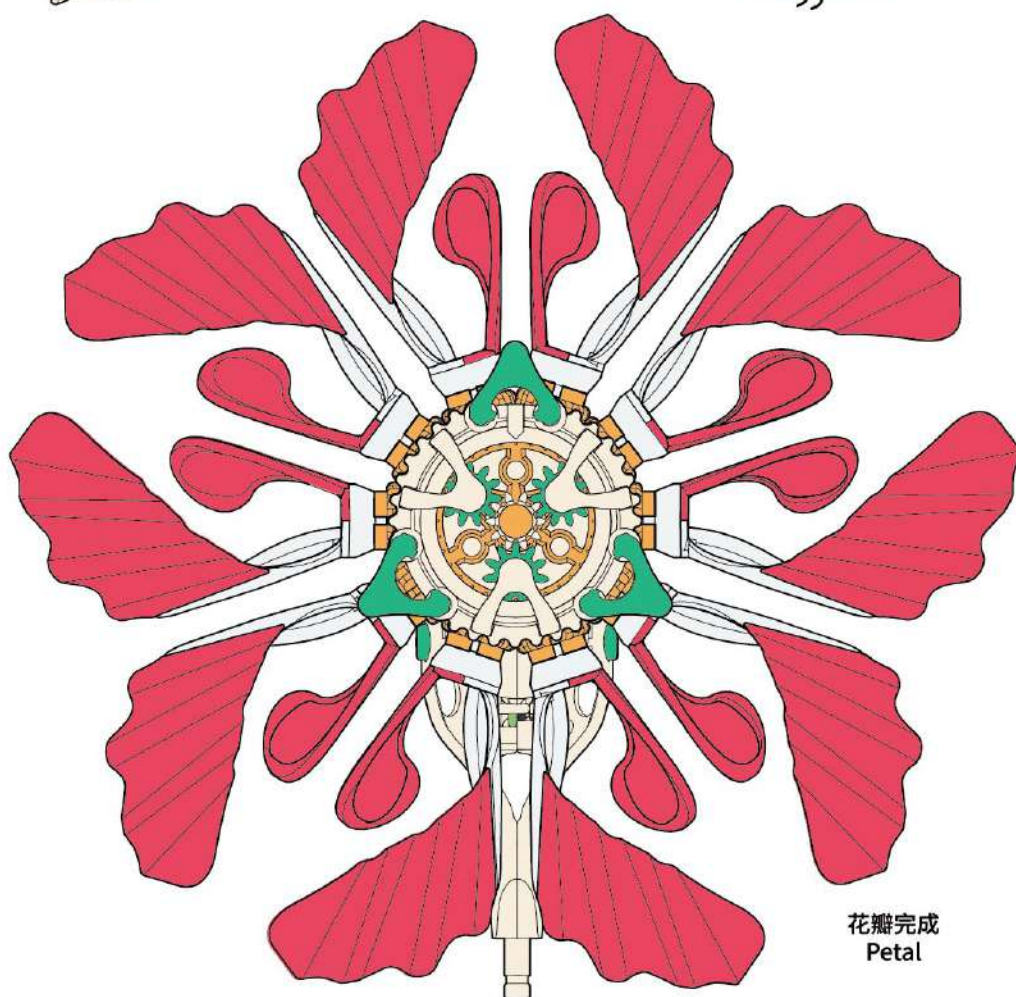
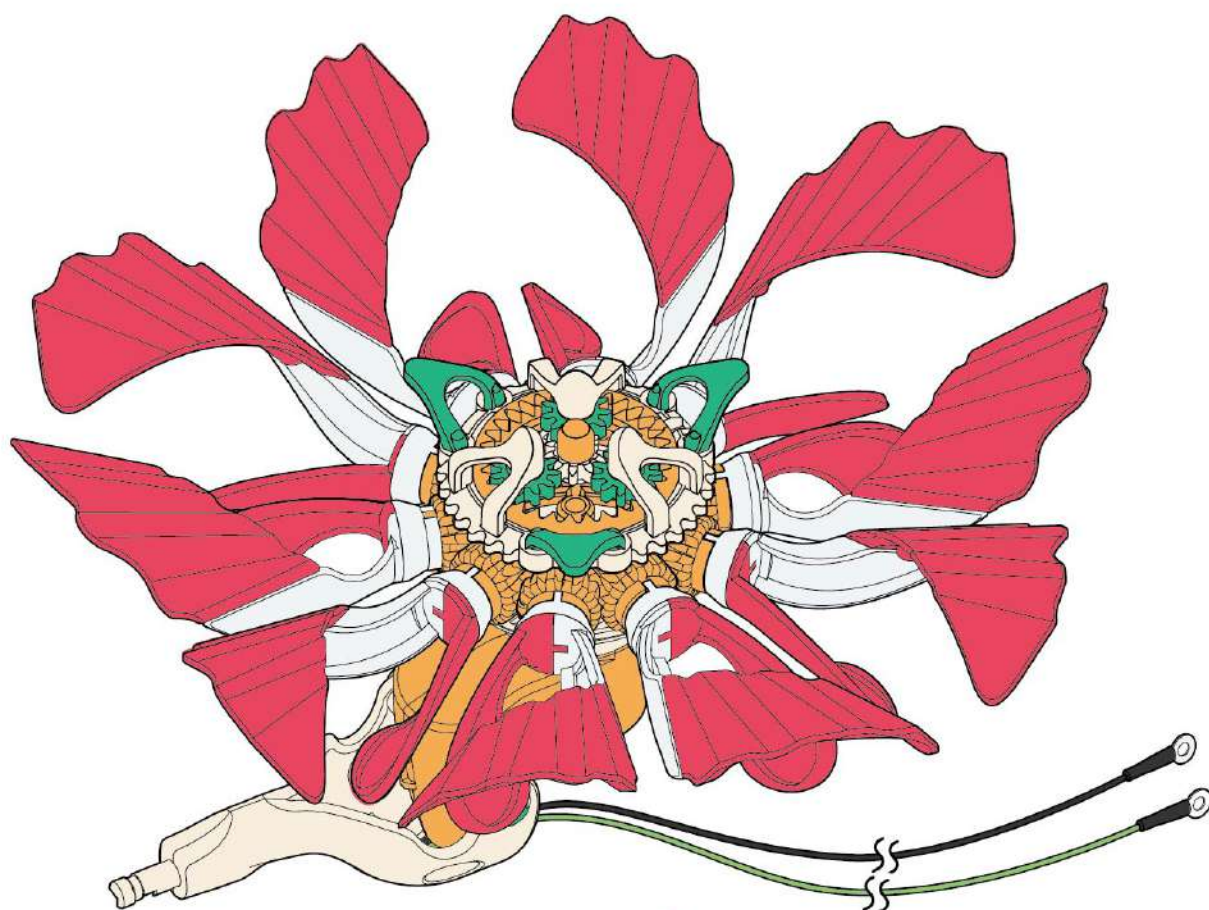
移除F8
Remove F8

5



x5

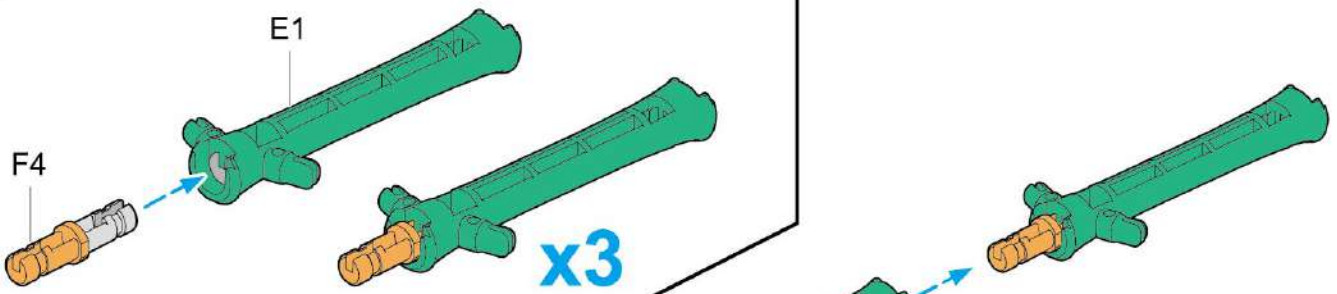




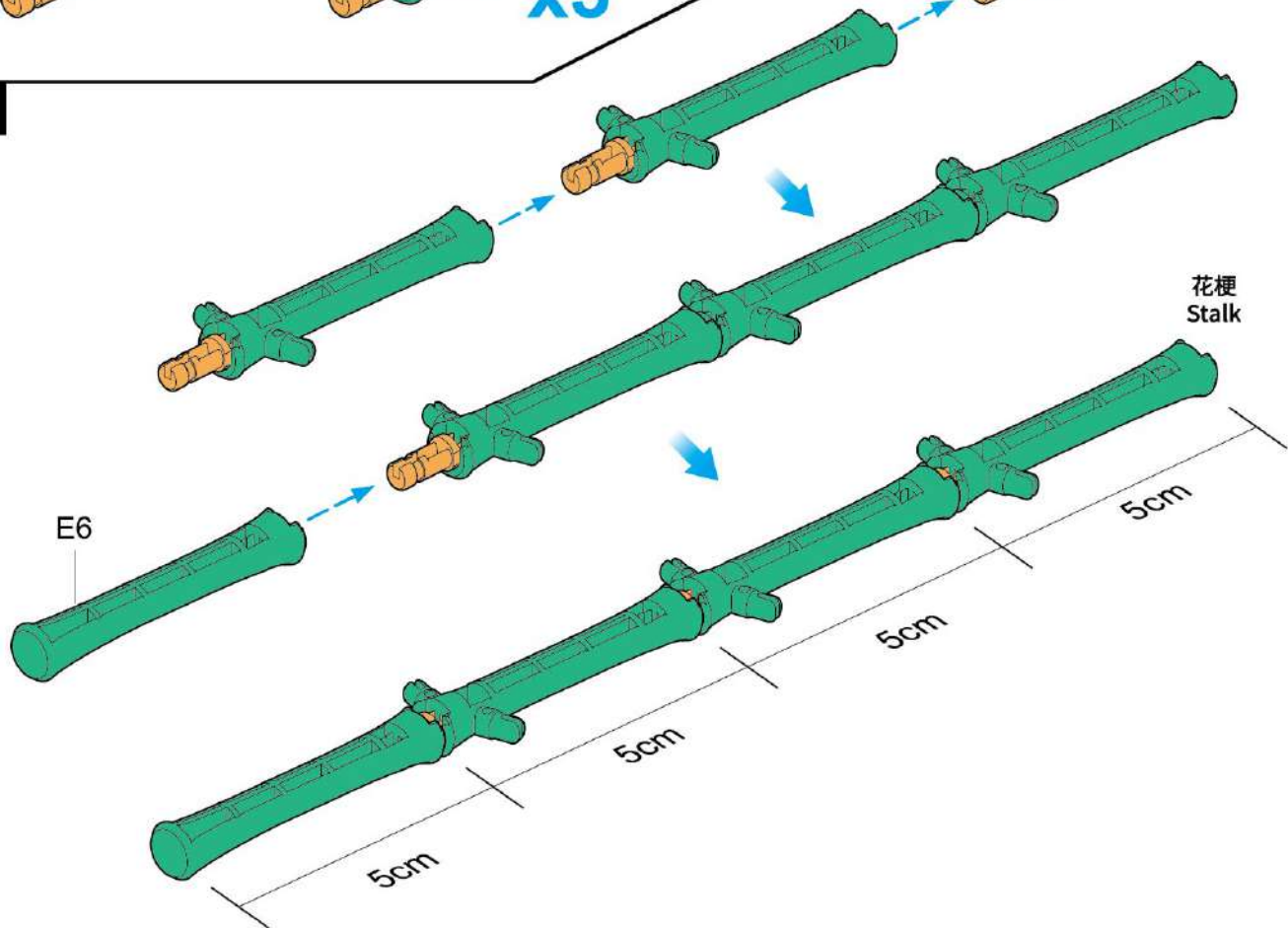
花瓣完成
Petal

花梗組裝 Stalk Module Assembly

1



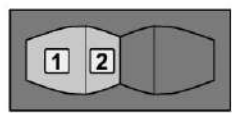
2



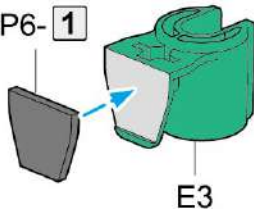
花瓶夾具組裝 Vase Clip Assembly

1

P6 海綿Sponge

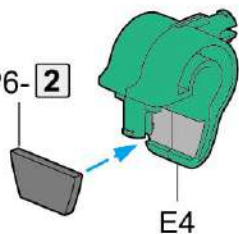


P6-1



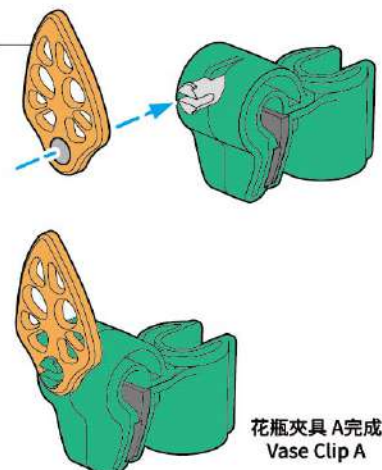
E3

P6-2



E4

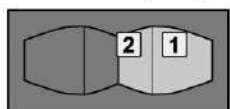
F2



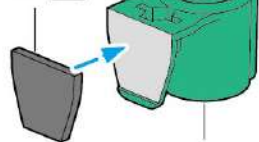
花瓶夾具 A完成
Vase Clip A

2

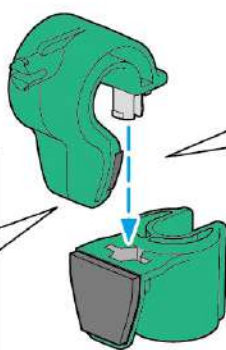
P6 海綿Sponge



P6-1



E3

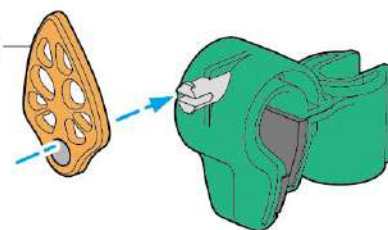


P6-2

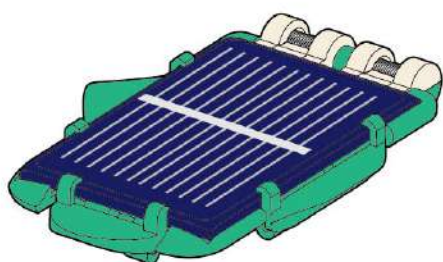
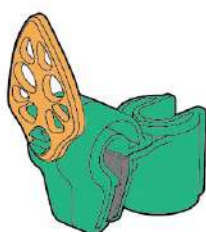
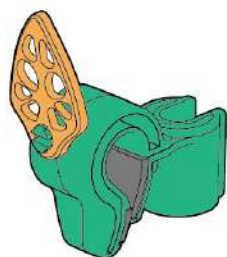
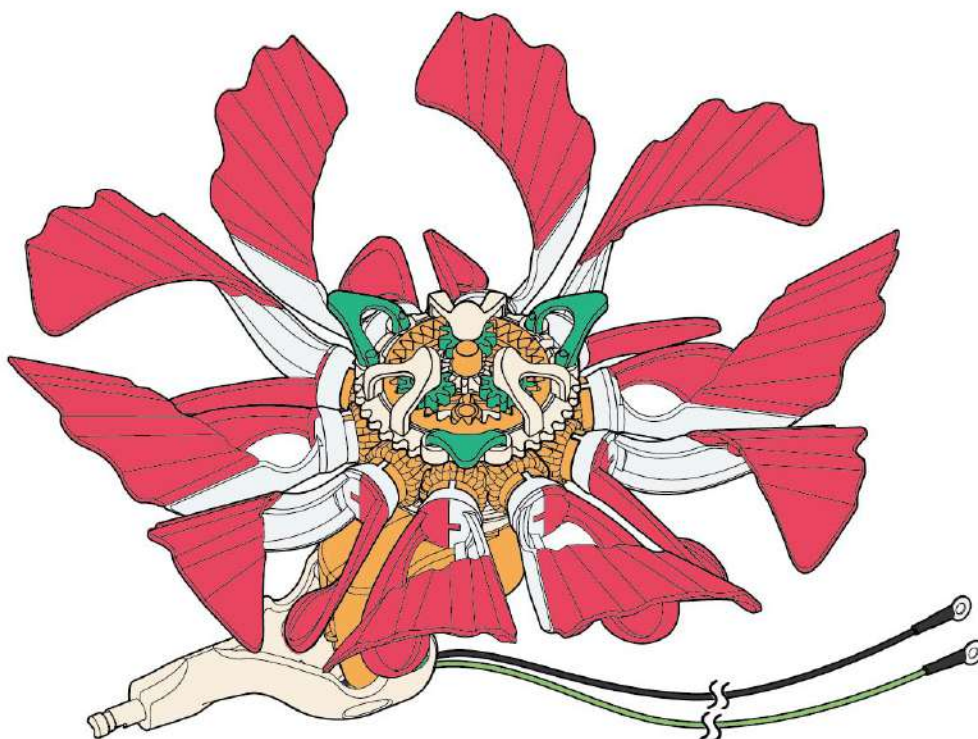


E2

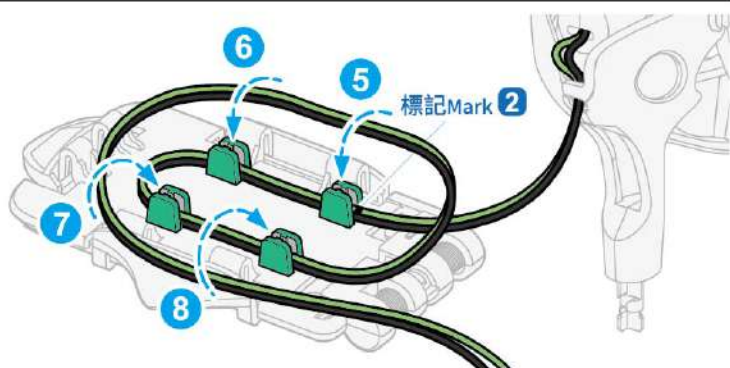
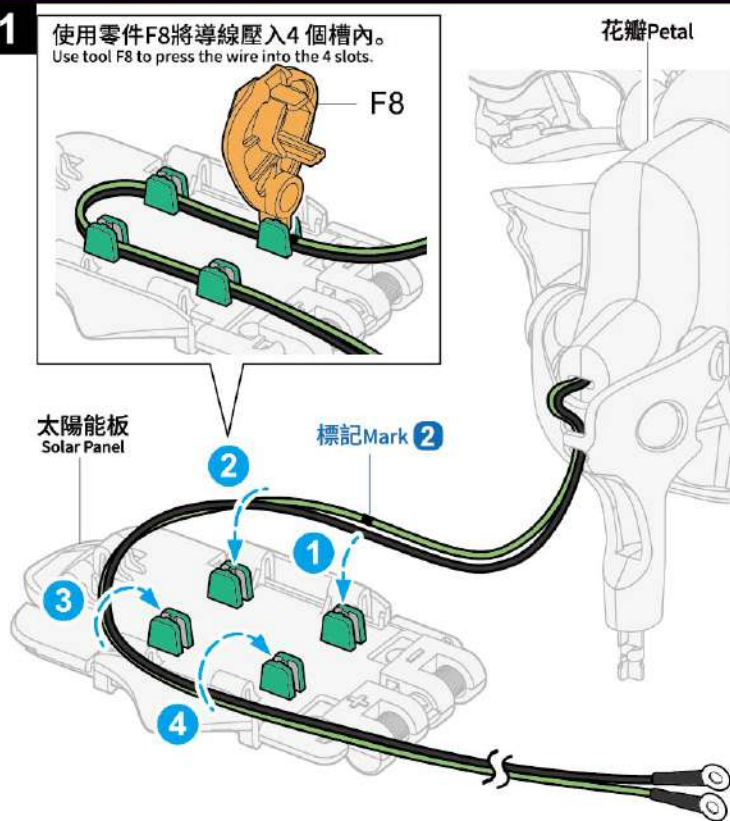
F2

花瓶夾具 B完成
Vase Clip B

遊玩方式 How to play

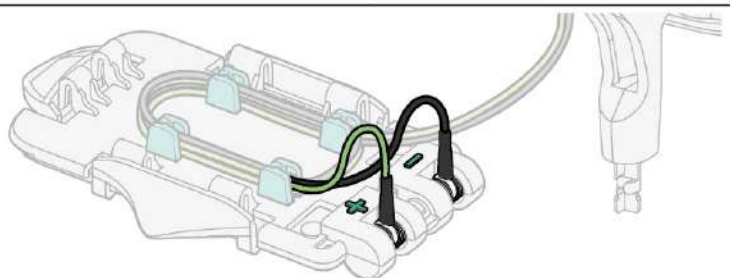
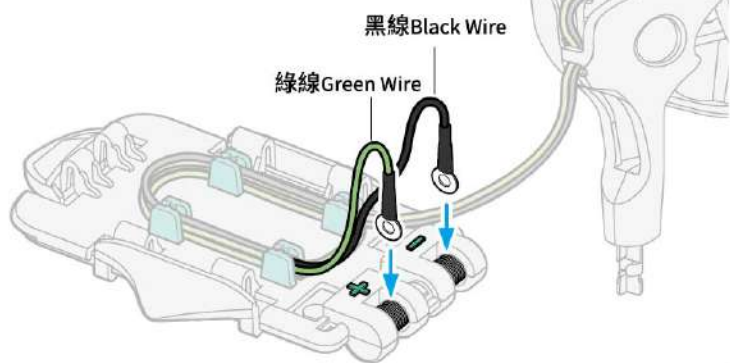
太陽能板
Solar Panel彈性夾具
Elastic Clip吸盤
Suction Cup花瓶夾具 A
Vase Clip A花瓶夾具 B
Vase Clip B花瓣
Petal花梗
Stalk

1 使用零件F8將導線壓入4個槽內。 Use tool F8 to press the wire into the 4 slots.

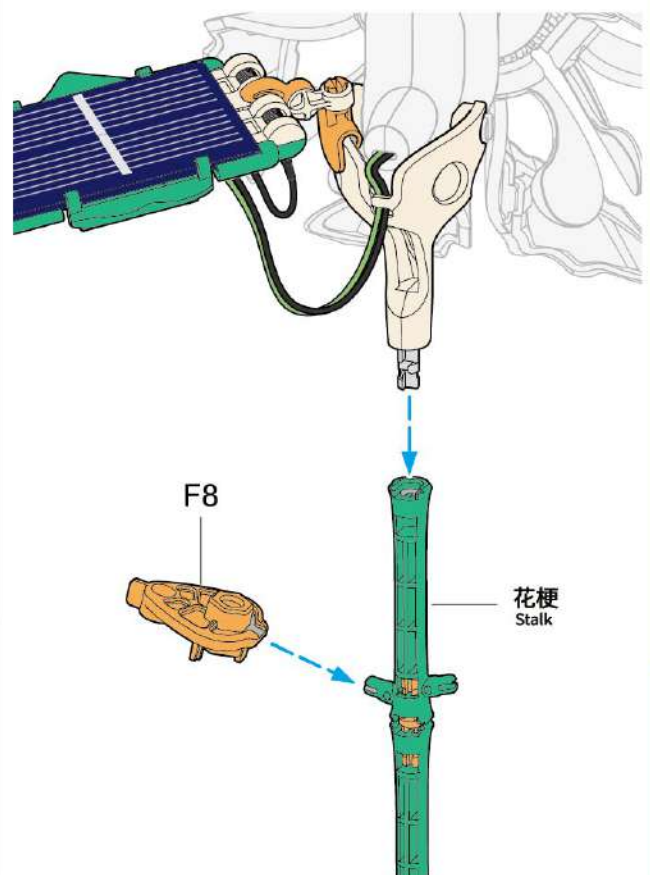
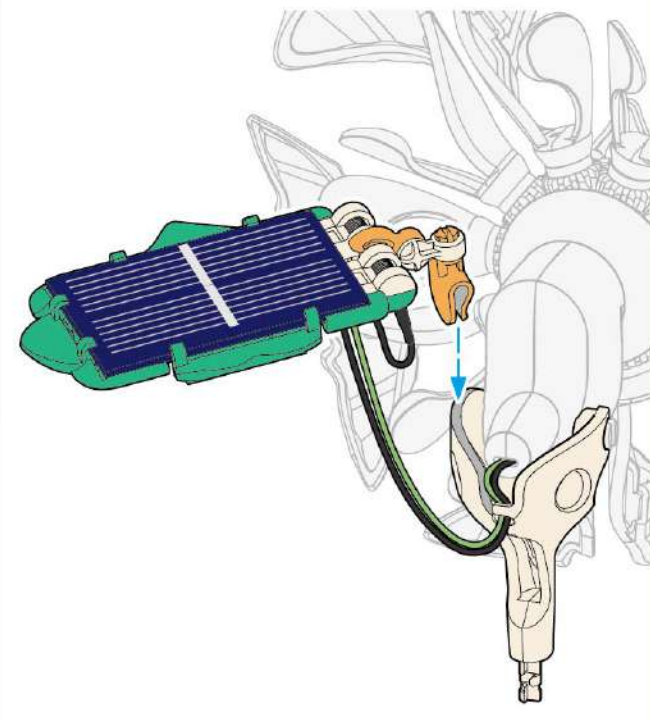
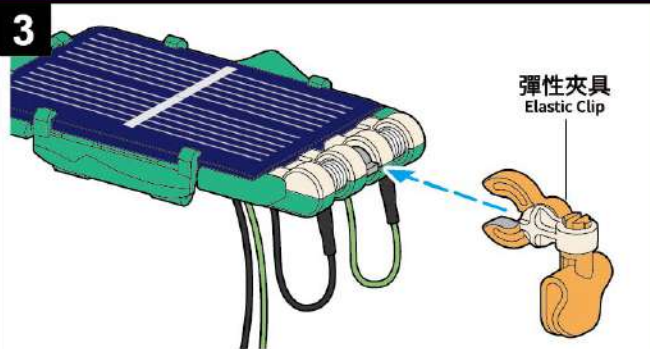


2

綠線Green Wire → ⊕
黑線Black Wire → ⊖



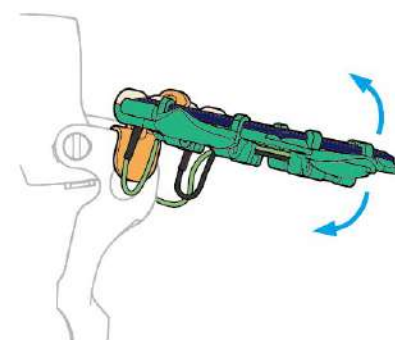
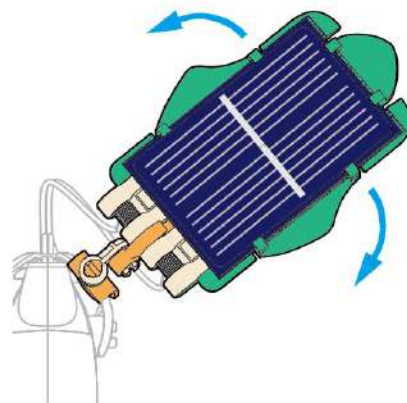
3



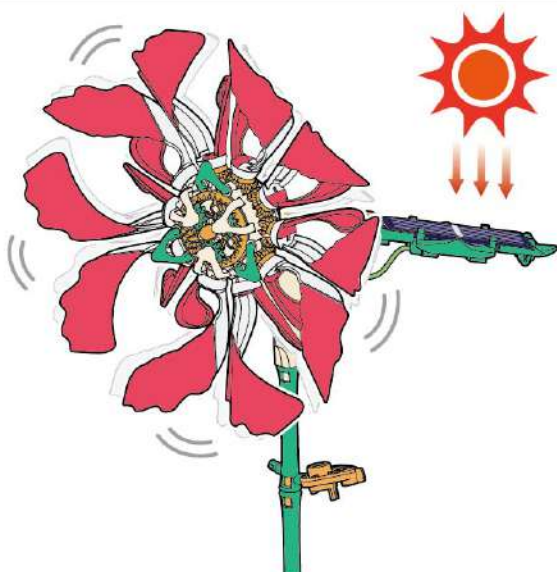
轉動Spinning



請調整太陽能板，使其正對太陽，以便獲得最佳日照。
Adjust the solar panel to face the sun.
This helps it get more sunlight.



太陽
SUN



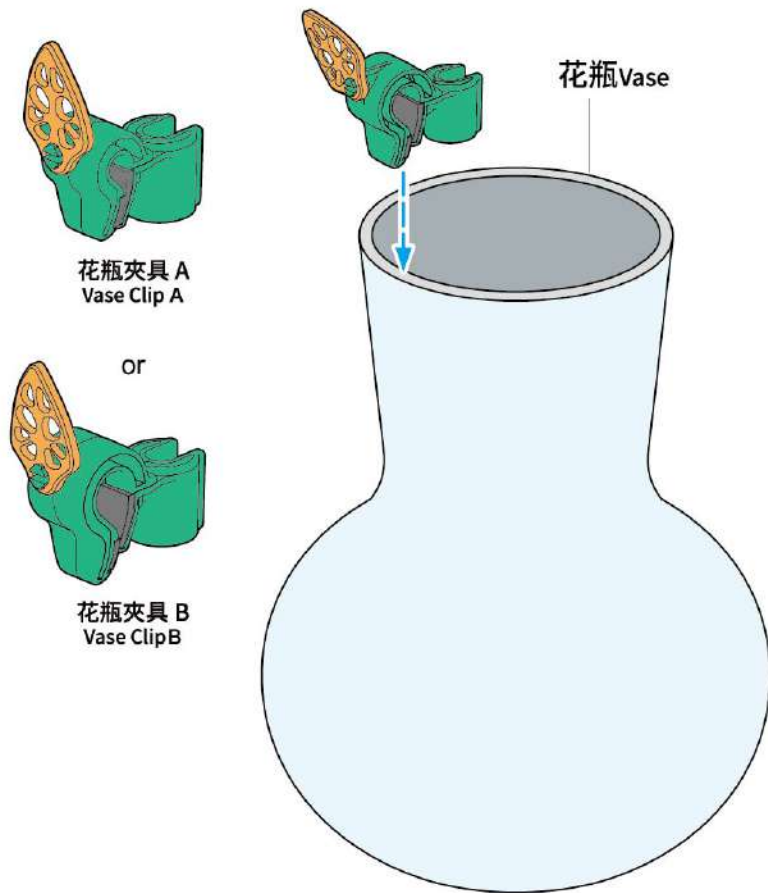
50 瓦以上鹵素燈
50W & up halogen



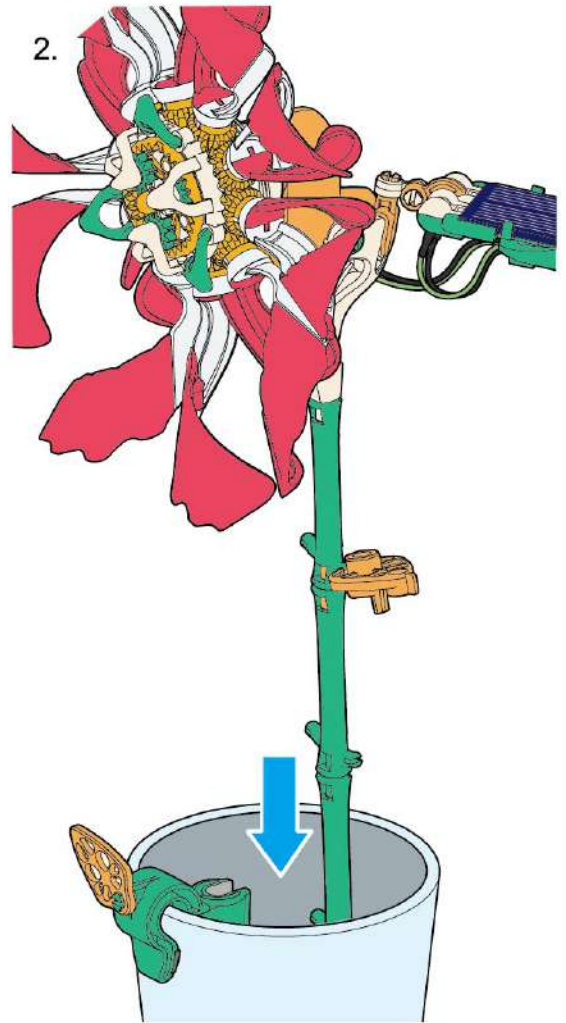
齒輪箱若未能正常運作，請參照第 6 頁步驟重新組裝。If the gearbox doesn't work, refer back to page 5 for re-assembly.

趣味玩法 1 Funway 1

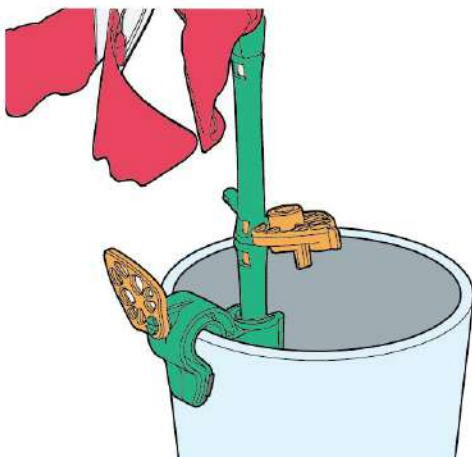
1. 請依花瓶口厚度，將花瓶夾具插入定位。
Insert the vase clip based on the thickness of the vase opening.



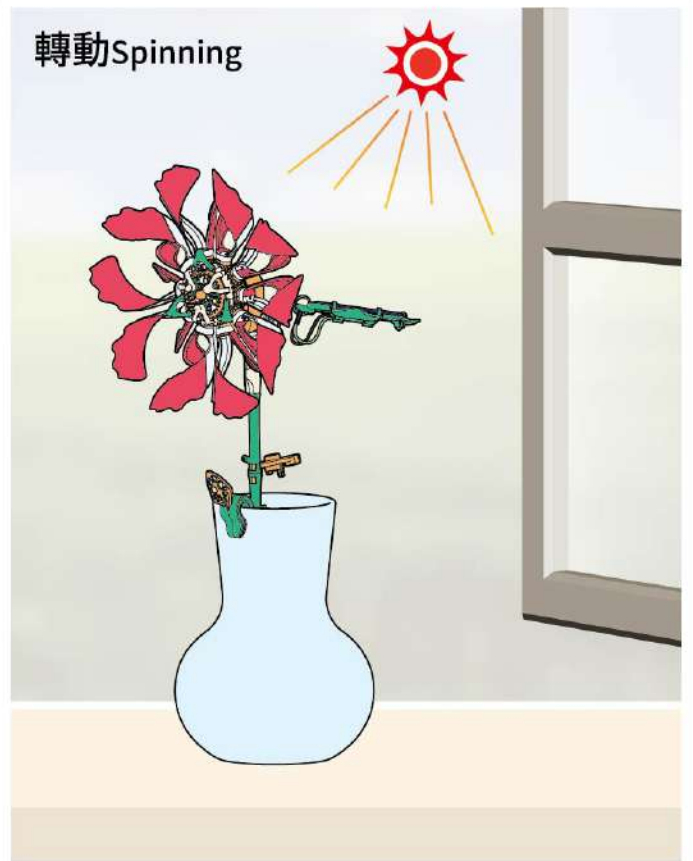
2.



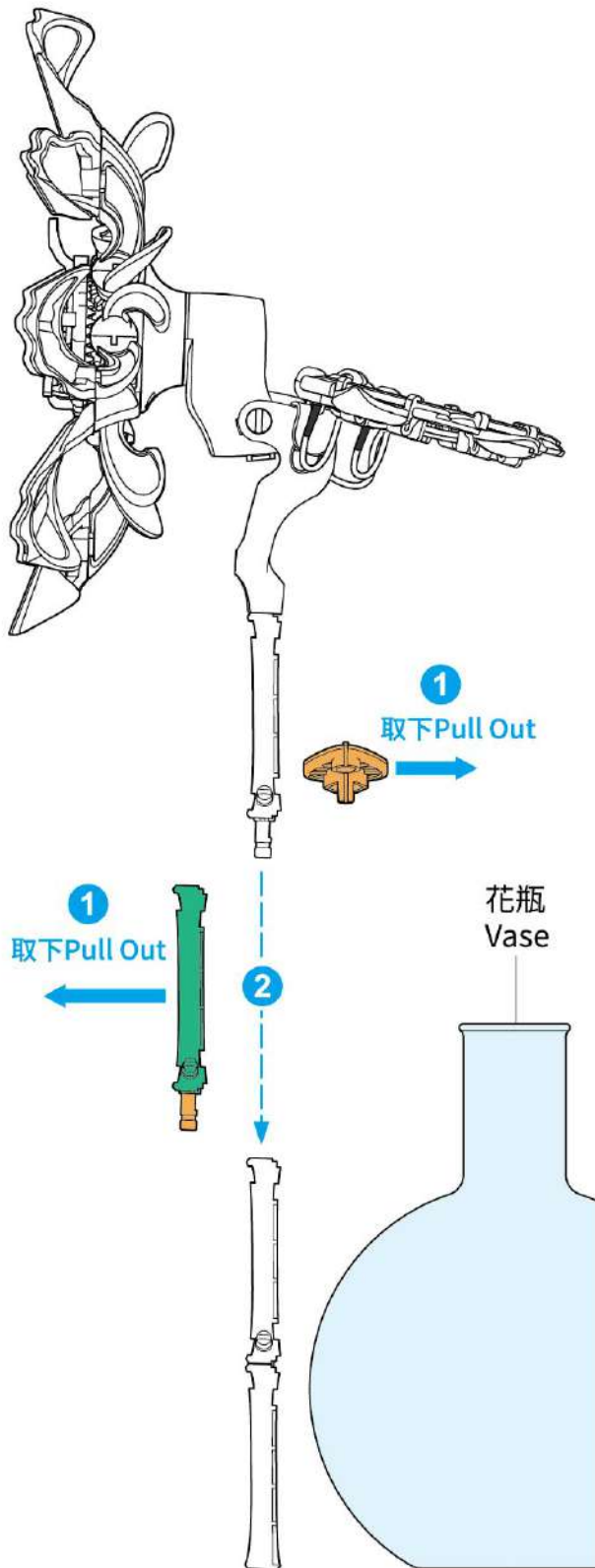
3.



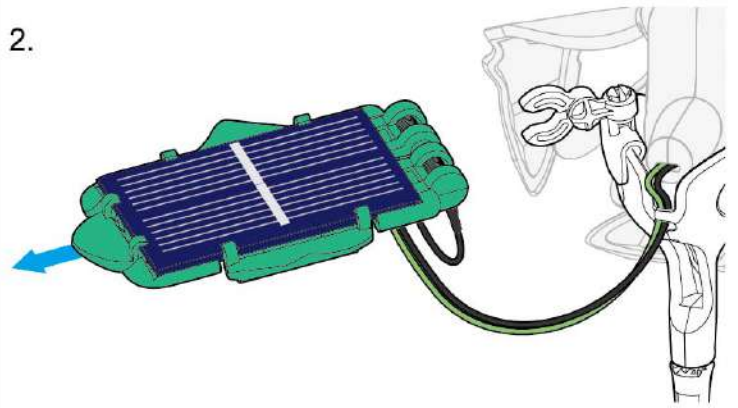
轉動Spinning



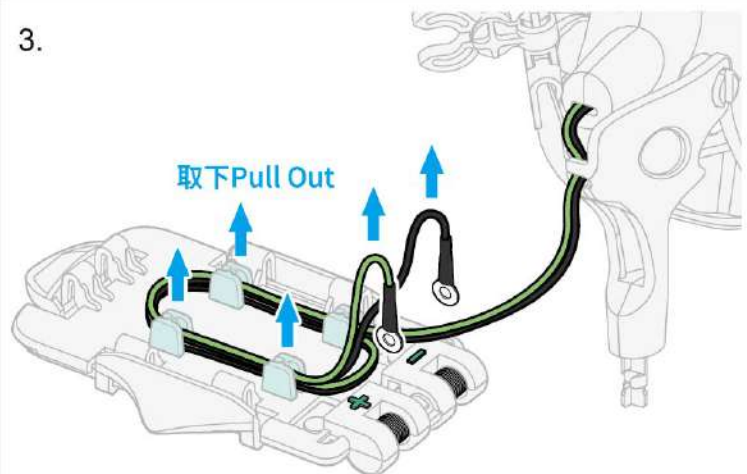
1. 請調整花梗長度，使其符合花瓶的高度。
Adjust the flower stem length to match the height of the vase.



- 2.



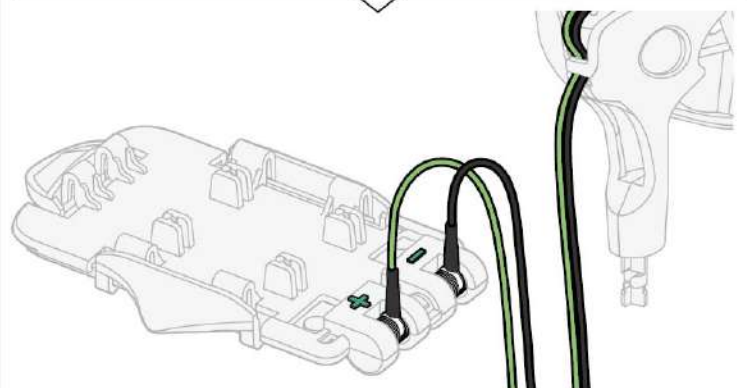
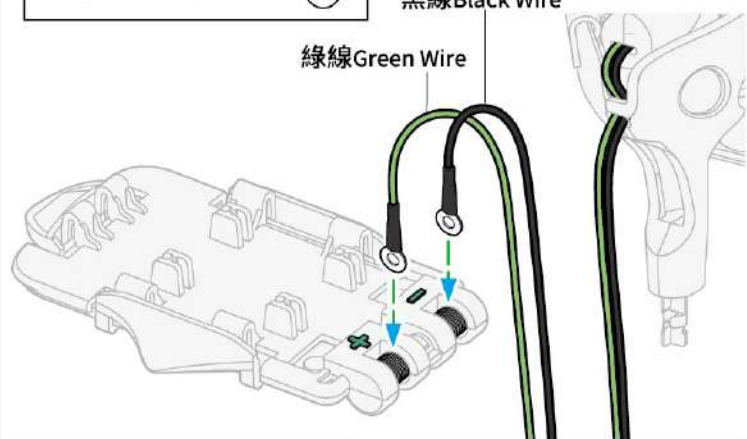
- 3.

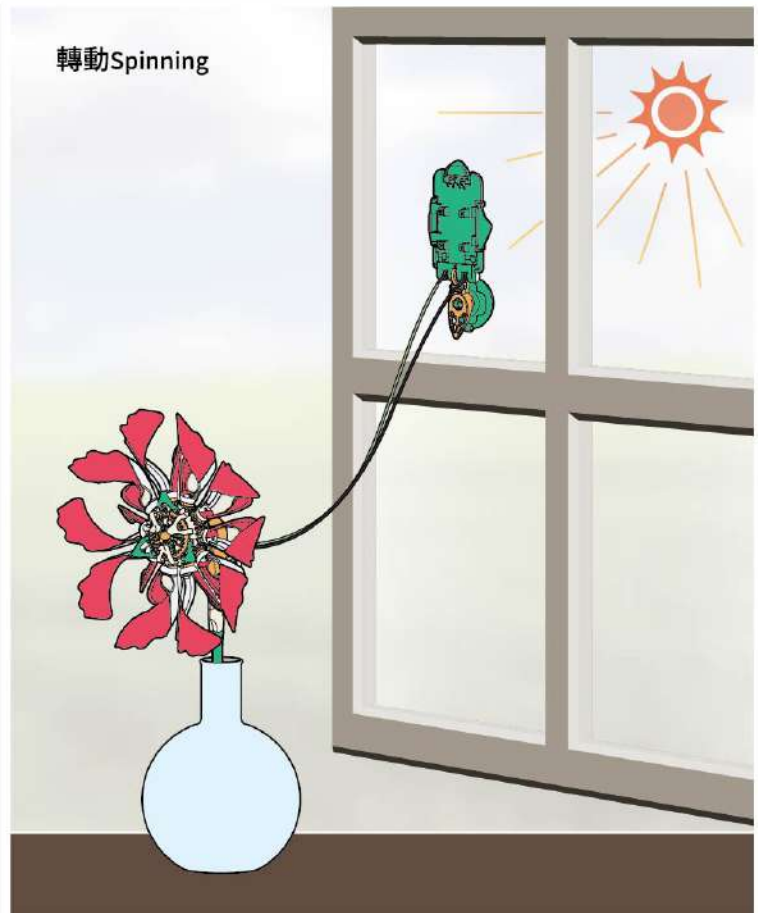
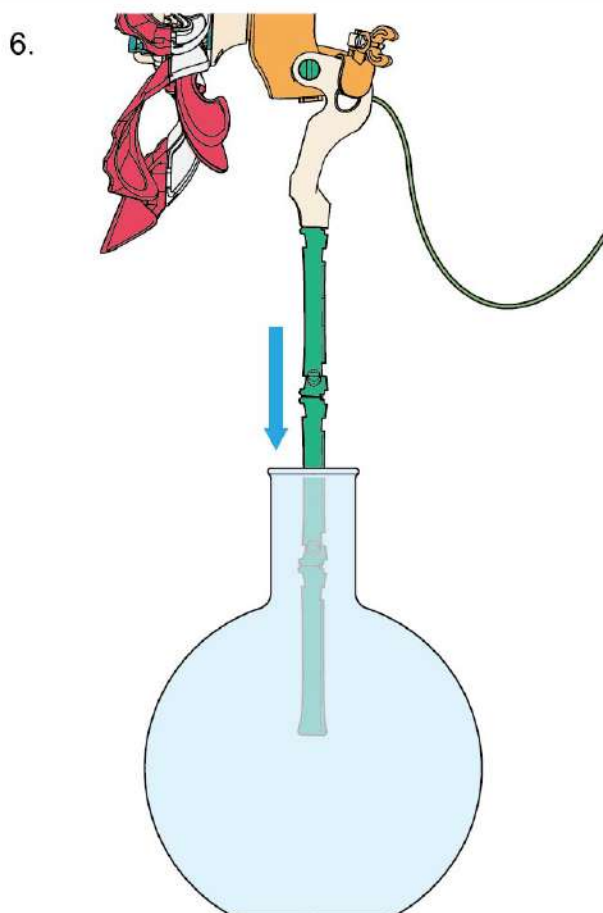
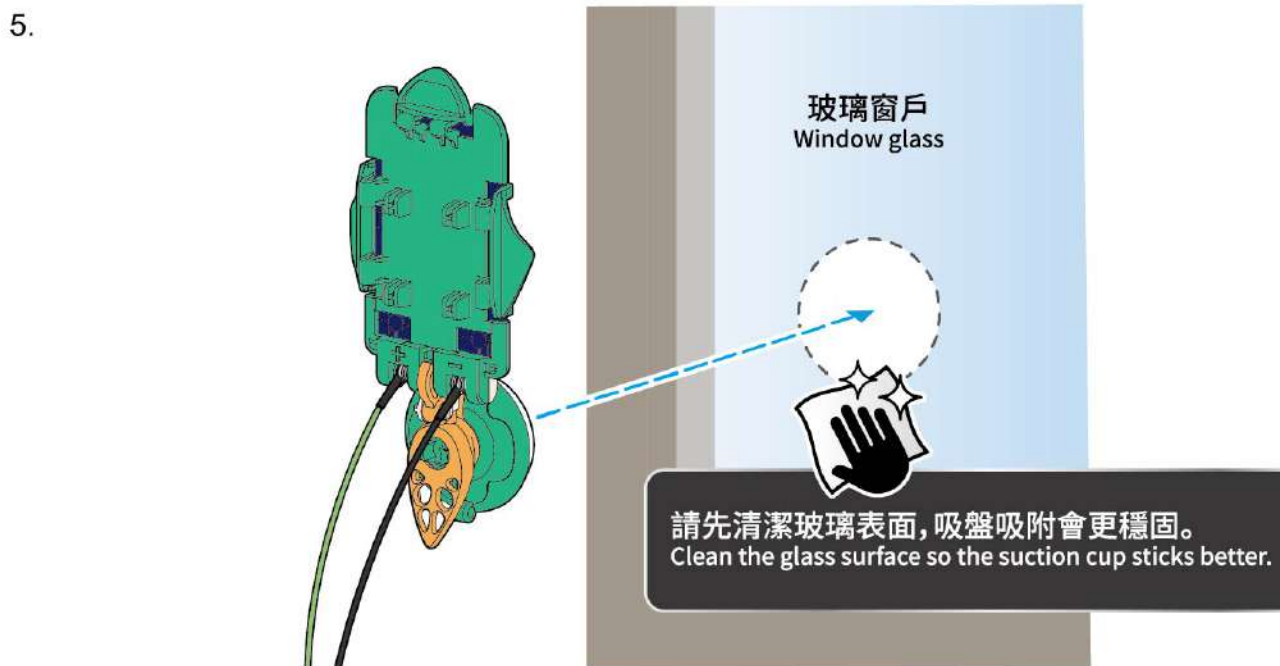
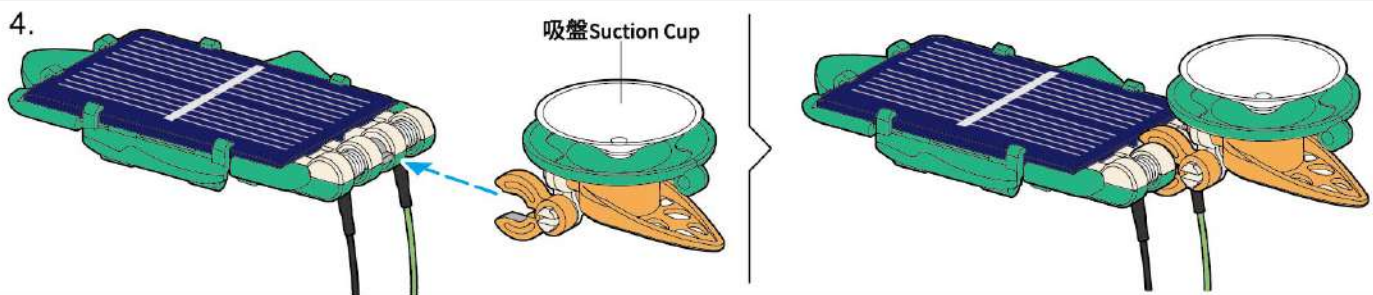


綠線Green Wire ← → ⊕
黑線Black Wire ← → ⊖

黑線Black Wire

綠線Green Wire





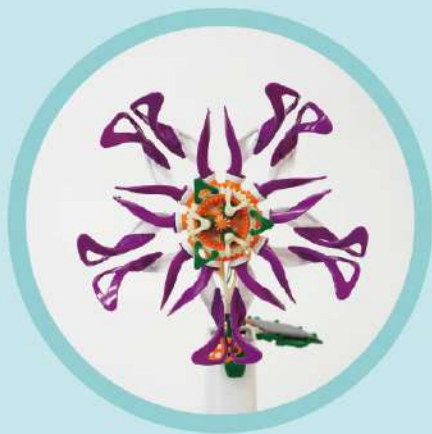
創意玩法



Creative Play Ideas

\ 創意多變組合：自由替換花瓣，創造專屬造型！ /

Creative Mix & Match: Freely swap petals to create your own unique design!



\ 療癒擺飾：陪伴每個日常角落～ /

Soothing Decoration: A charming little ornament to brighten up every corner of your day~



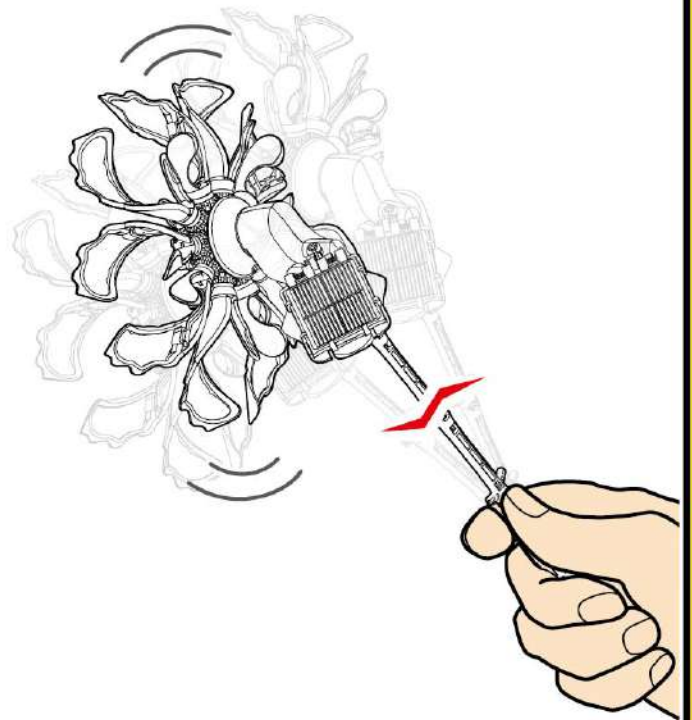
注意事項 Warning



請勿澆水 Do not water.



請勿大力搖晃，以免發生斷裂。
Do not shake too hard. It may break easily.



請勿淋雨
Do not let it get wet in the rain.



現在就是享受樂趣的時刻！
It's time to have some FUN !



1. 將它放到戶外，在陽光直射下使用。天氣晴朗時效果最佳。Put it outside in direct sunlight. It works best on a sunny day.
2. 也可以在室內嘗試，使用 50 瓦以上的鹵素燈（記得請大人協助！）。陰天、陰影處或一般室內燈光下，它是無法運作的喔。You can also try it indoors with a 50-watt halogen lamp (ask an adult to help!). It won't work on cloudy days, in the shade, or under regular room lights.

猜你也會喜歡——



GE-683

太陽能大眼蟲



GE-682

太陽能野豬



GE-691

企鵝寶寶Bobo



GE-736

鹽水太空人



GE-732

空氣動力超跑



GE-896

AI 鼓掌刺蝟



GE-735

AI編程變色龍-酷迪



GE-638

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NEW TAIPEI CITY, TAIWAN Post code:231023

服務專線Tel:+886 2 2218 3233

www.prokits.com.tw

Email: pk@mail.prokits.com.tw

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