

DIY液壓挖土機

枋寮高中科學創意團隊

貼心提醒

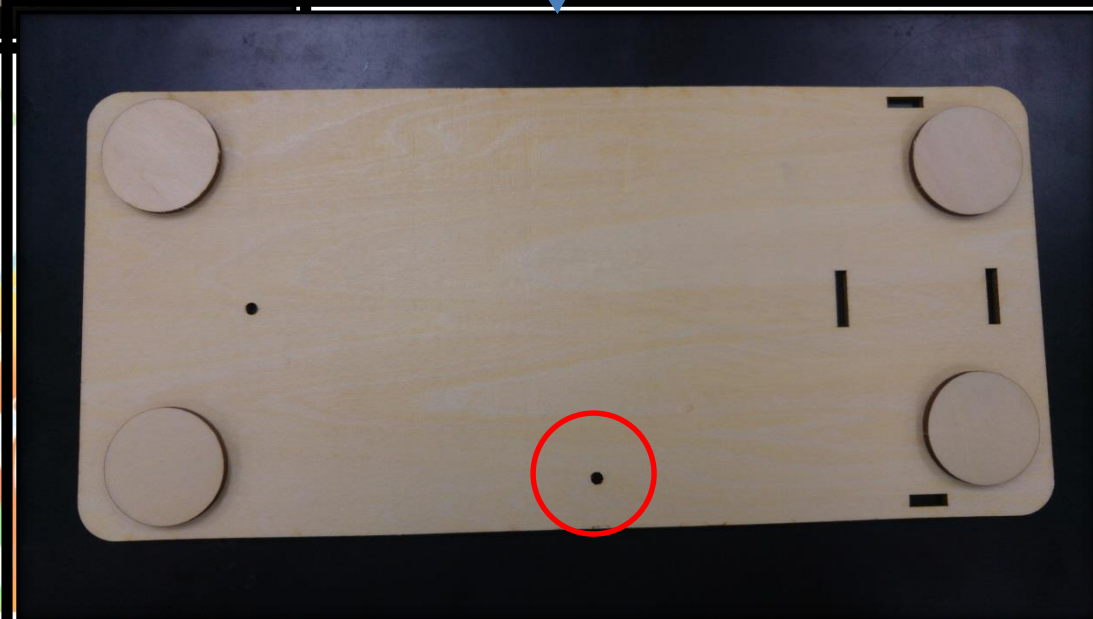
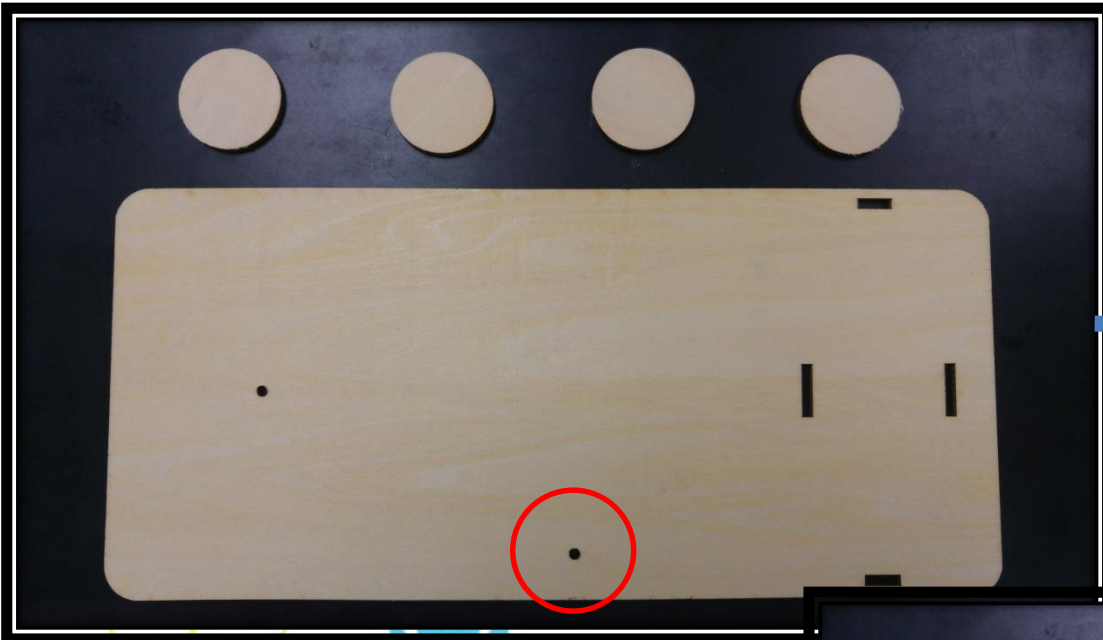
- 使用白膠或熱熔膠時適量就好，以黏得住為原則，量多不美觀，甚至機構會不平整或卡住的現象。
- 熱熔膠前端會加熱，使用時小心被燙到。
- 螺帽不要鎖緊。

使用熱熔膠時，
記得收起架子，
方便工作。

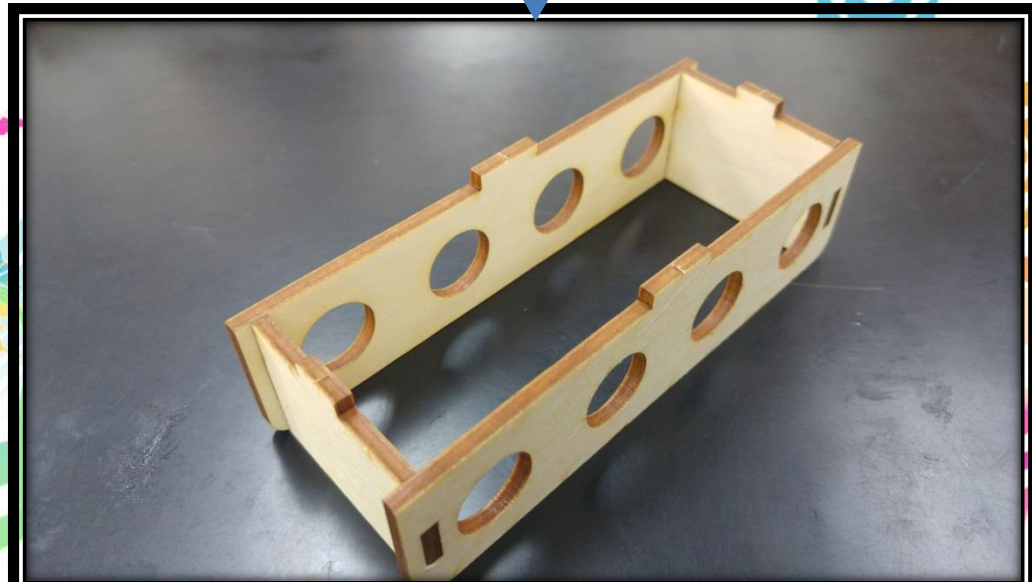
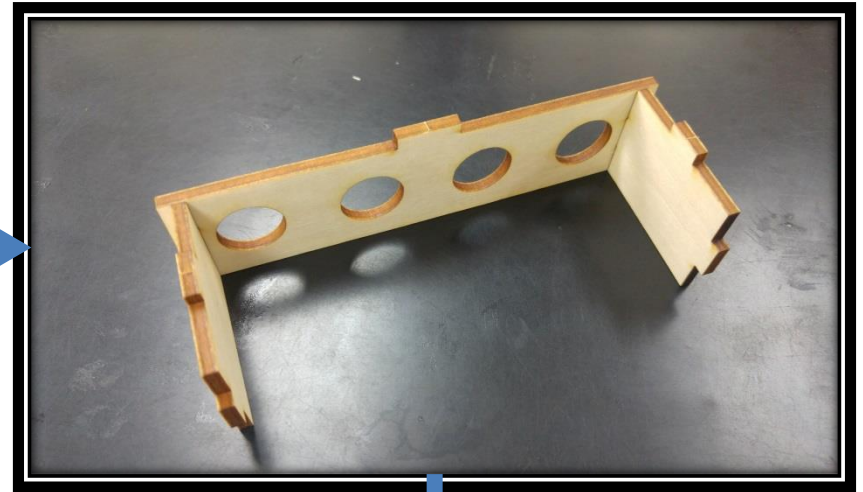
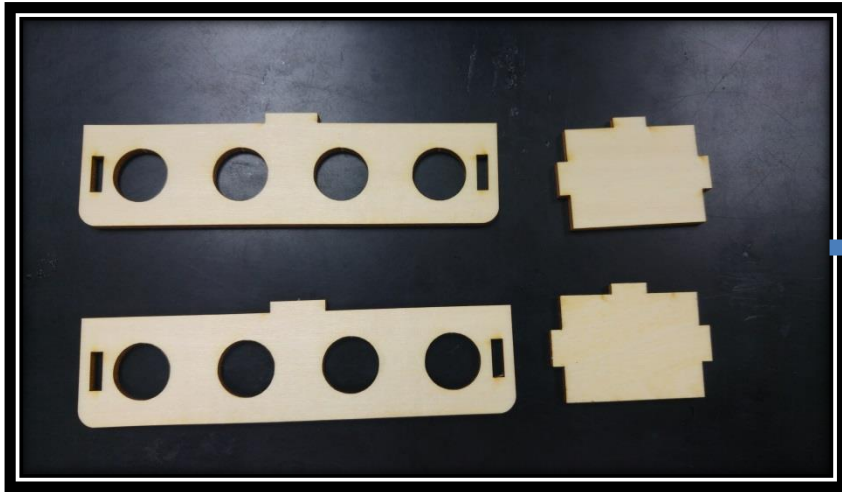


黏合底座墊片(白膠)

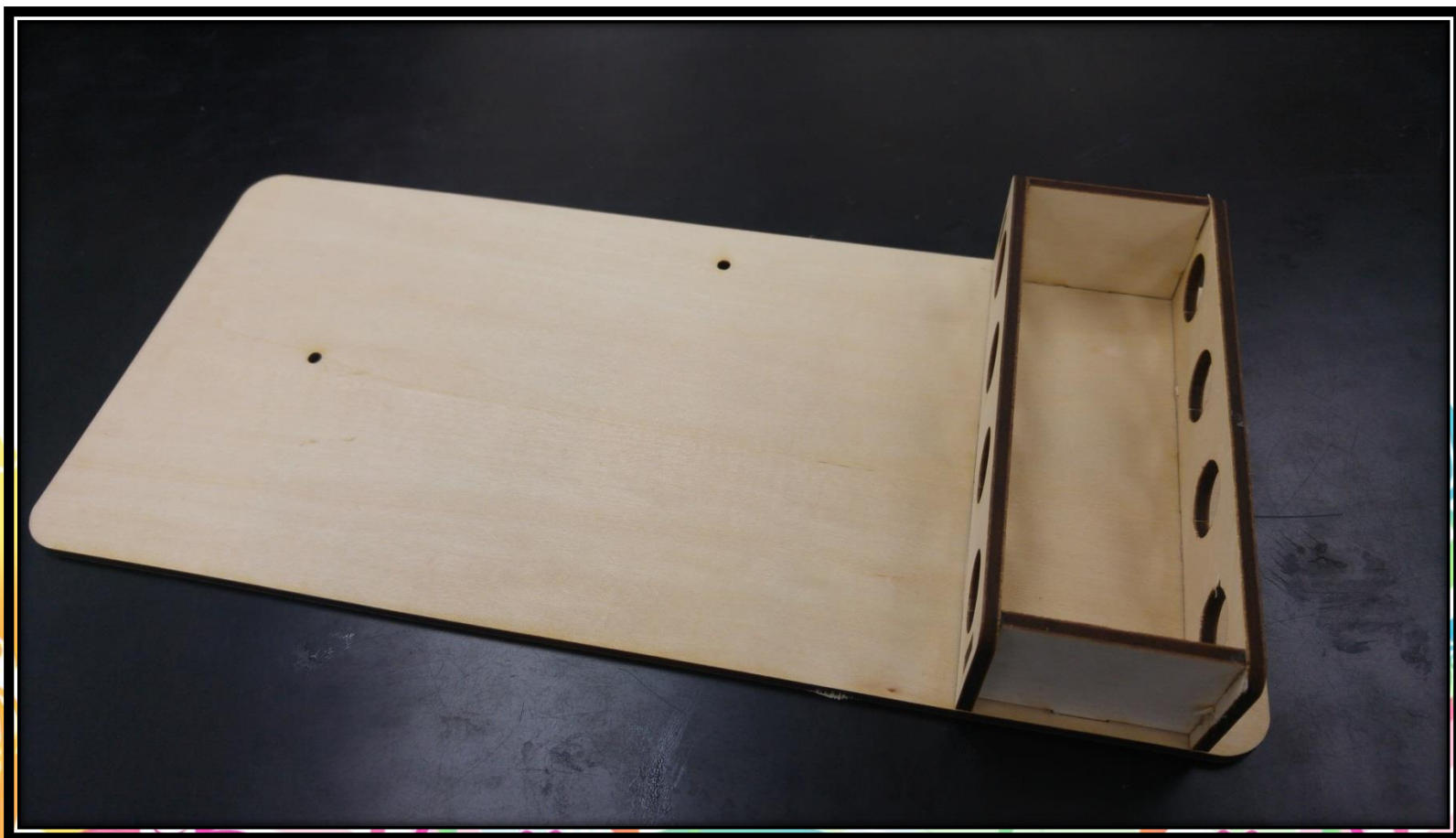
注意底板的方
向，黏合時不
要蓋到孔位



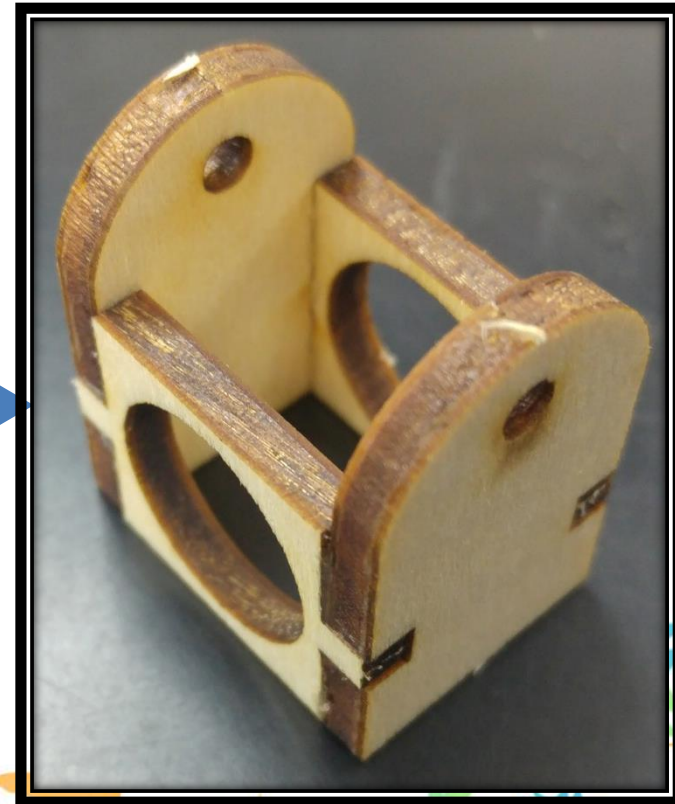
組裝液壓筒固定框(白膠)



組裝液壓筒固定框和底座(白膠)

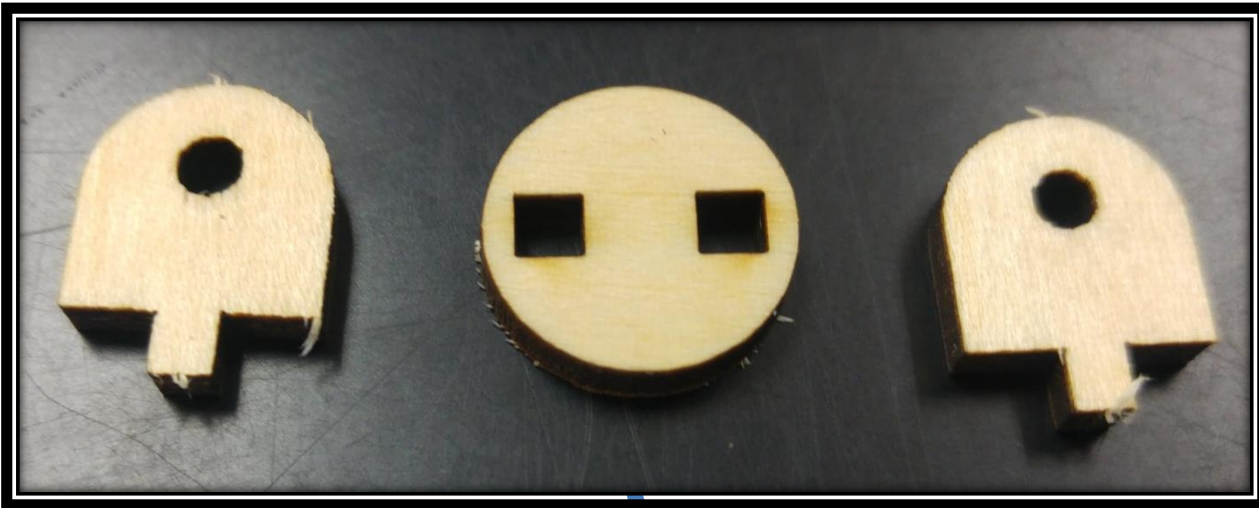


組裝液壓筒固定環(白膠)



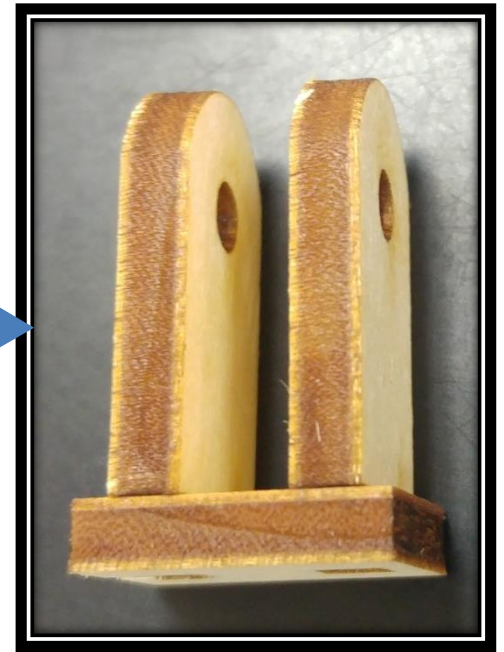
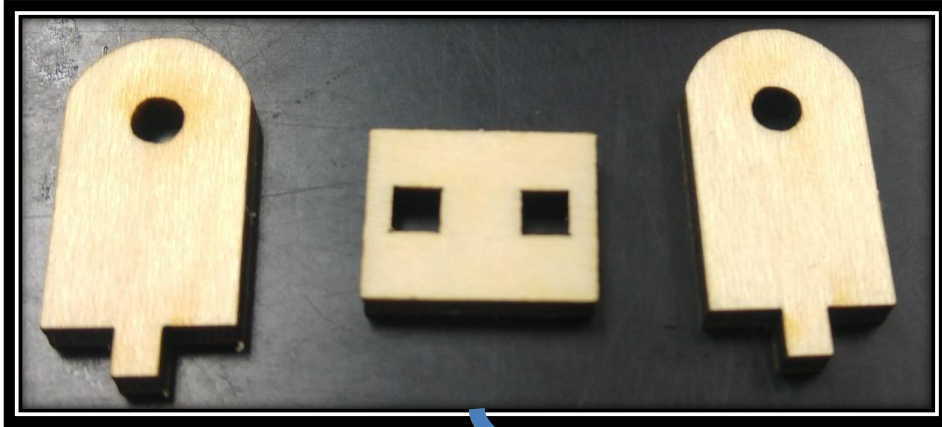
一共需要4個

組裝液壓筒短活動環(白膠)



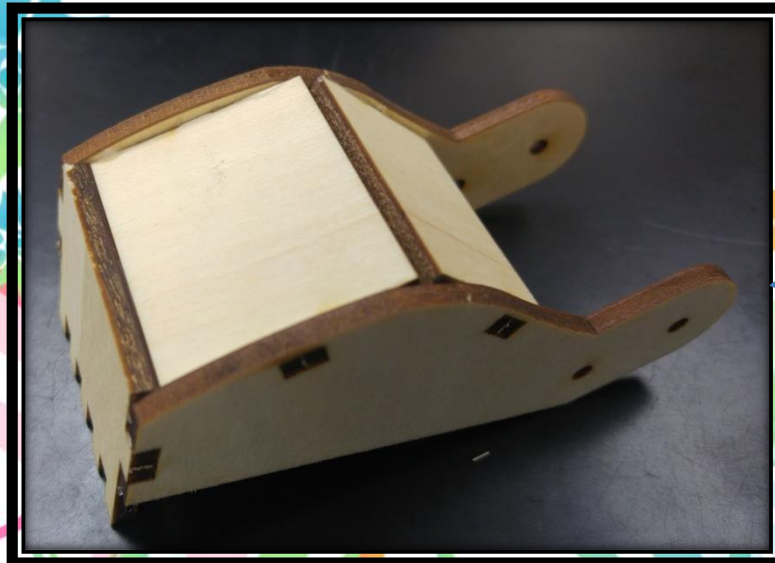
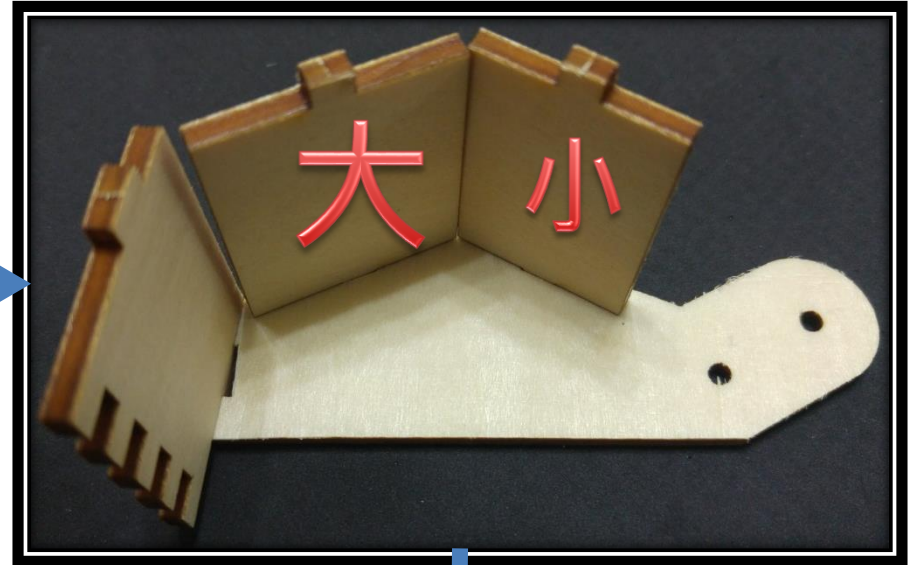
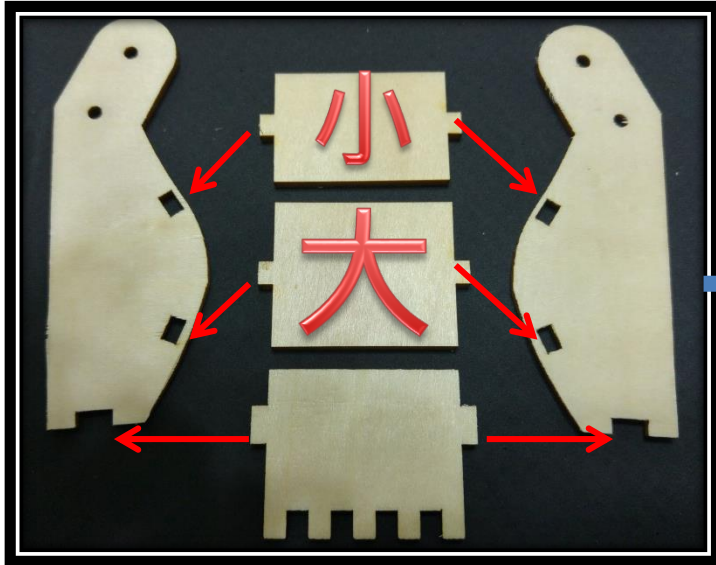
需要3個

組裝液壓筒長活動環(白膠)

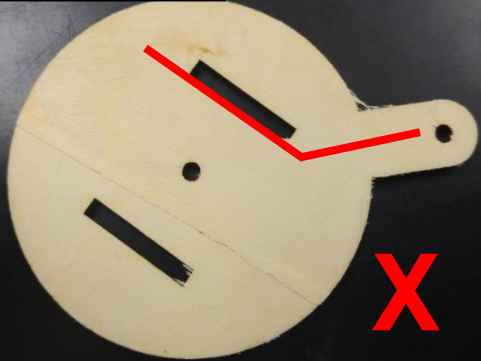
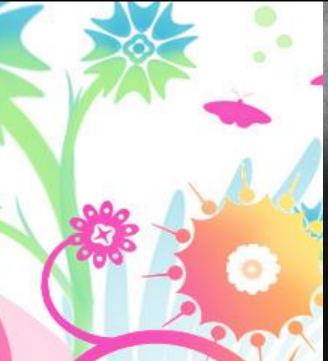
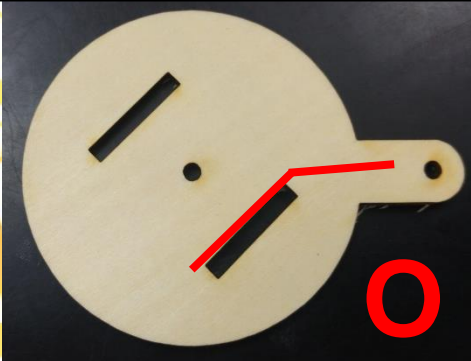
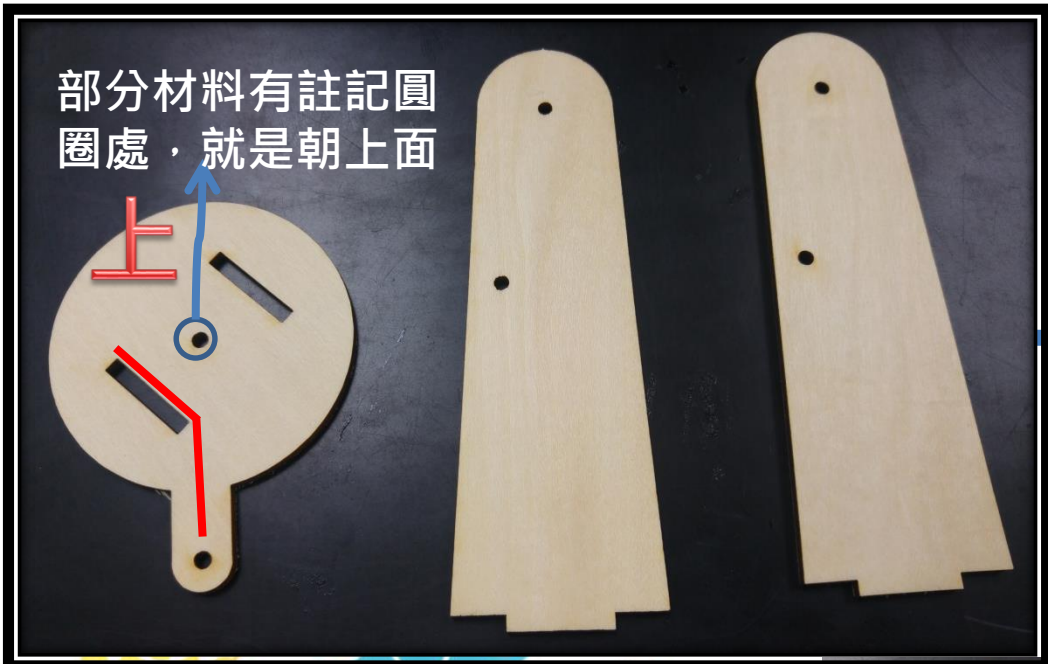


只需要1個

組裝挖斗(白膠)

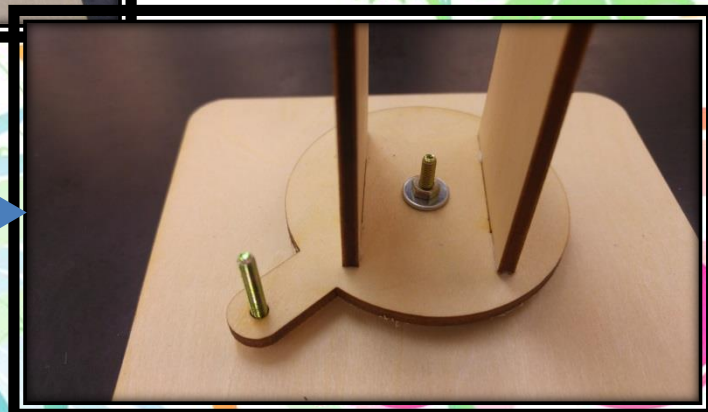
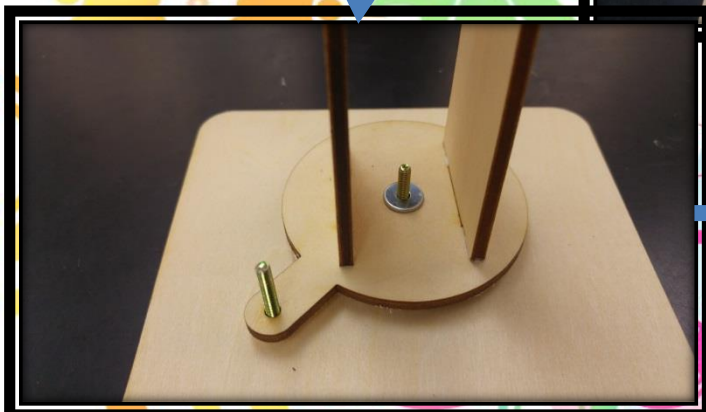
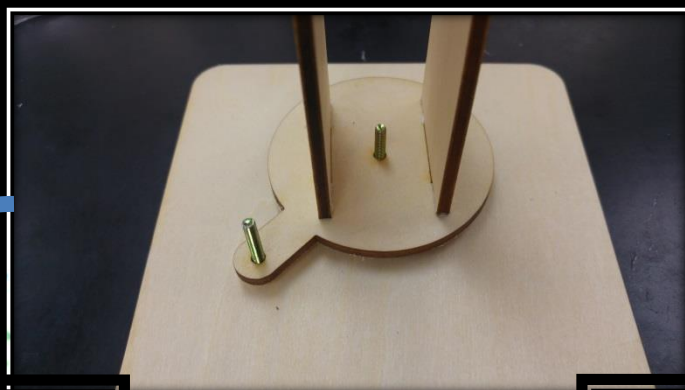
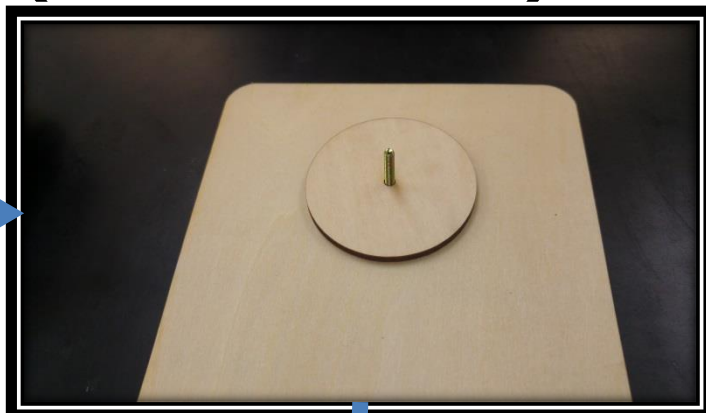
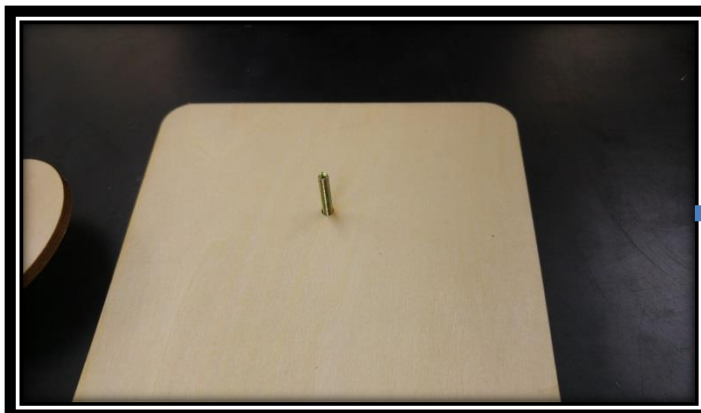


組裝旋轉軸(白膠)



要注意旋轉盤的方向，很重要。

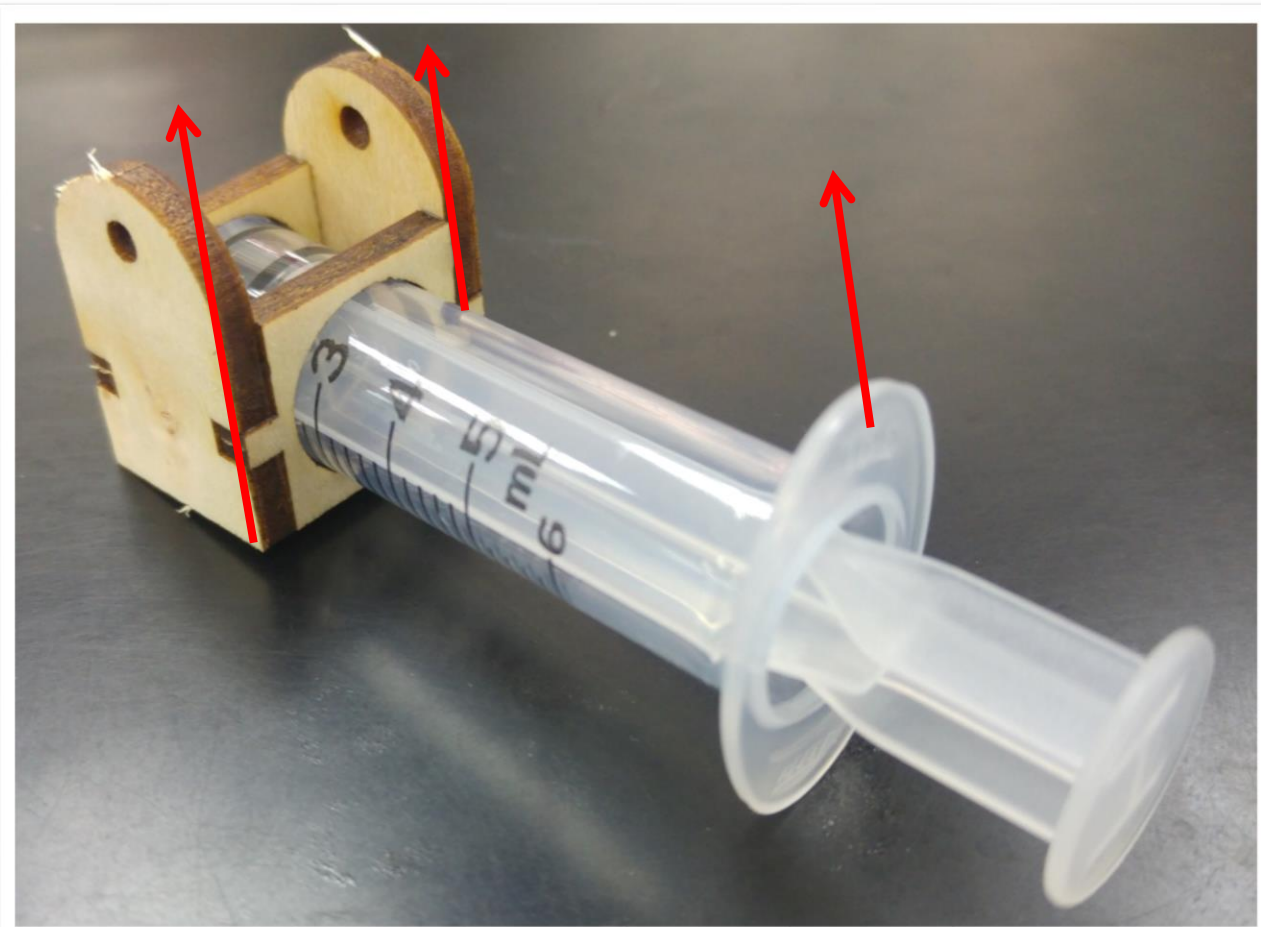
結合旋轉臂和底座(2cm螺絲)



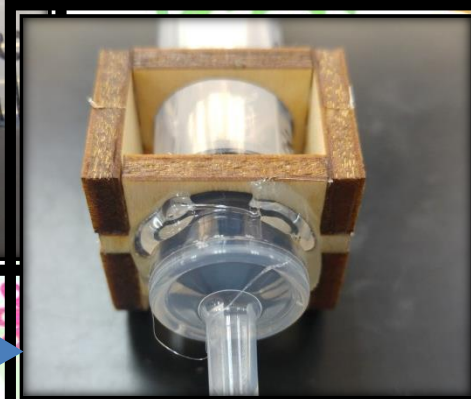
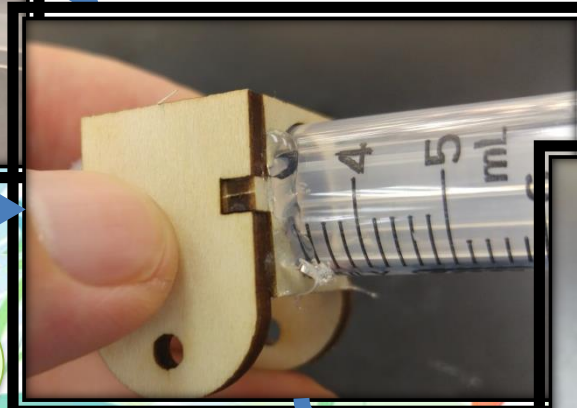
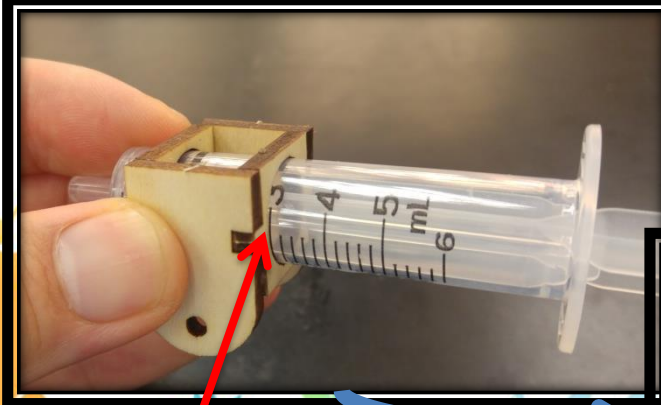
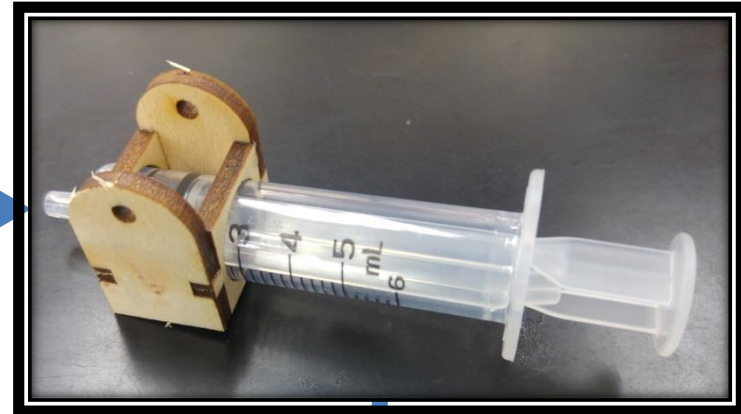
黏合液壓筒固定環-注意事項

液壓筒推柄轉到直的方向，和固定環的半圓形平行

不然會
卡住喔

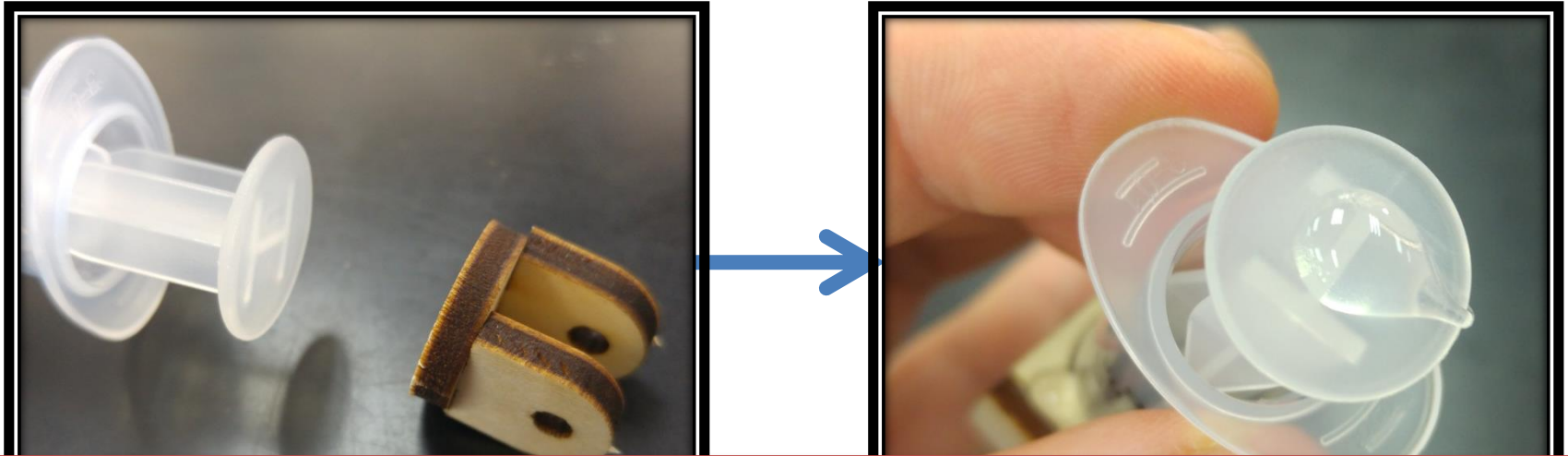


黏合液壓筒固定環(熱熔膠)

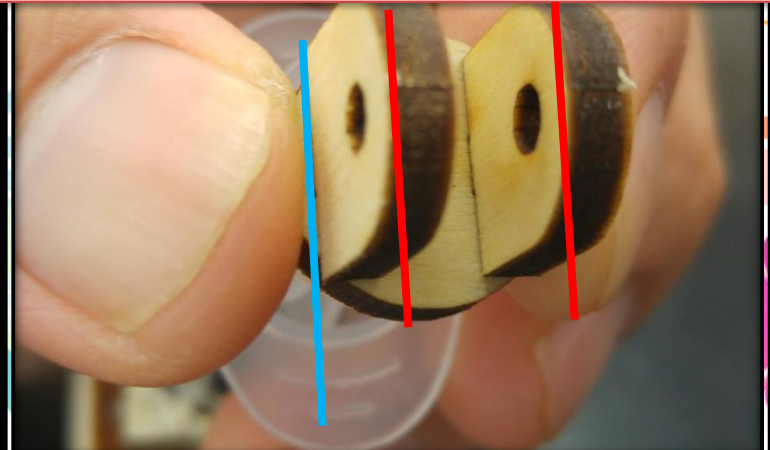
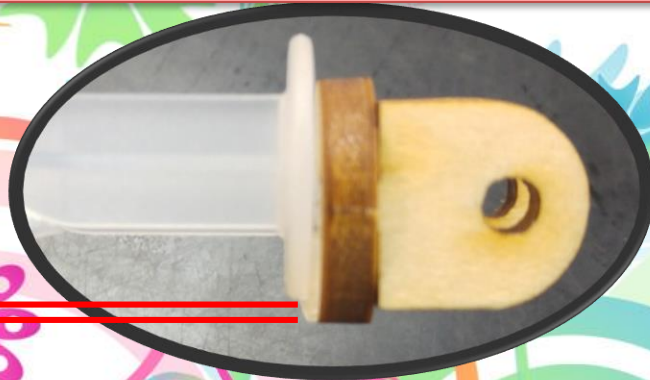


對齊3mL再黏
合，總共4個

黏合液壓筒短活動環(熱熔膠)



- 共3個，其中2個對準中間黏合。
- 第3個平行液壓筒的長邊，黏下面一點，約凸出2mm。



液壓筒裝水X4



1. 裁剪水管(15cm,20cm,20cm,35cm)。
2. 裝塑膠管時，捏一下比較好裝。
3. 記得要把水中大部分的空氣擠出來。

連接液壓筒-注意事項

未裝水的液壓筒記得先推到底。



穿過固定框，連接液壓筒(共4對)



最長的管子，要接活動環有凸出2mm的液壓筒。

都接管子一樣長的液壓筒。(長度屬於中間的)

裝15cm管子的液壓管，請裝在最左邊。

黏合固定框和液壓筒(熱熔膠)



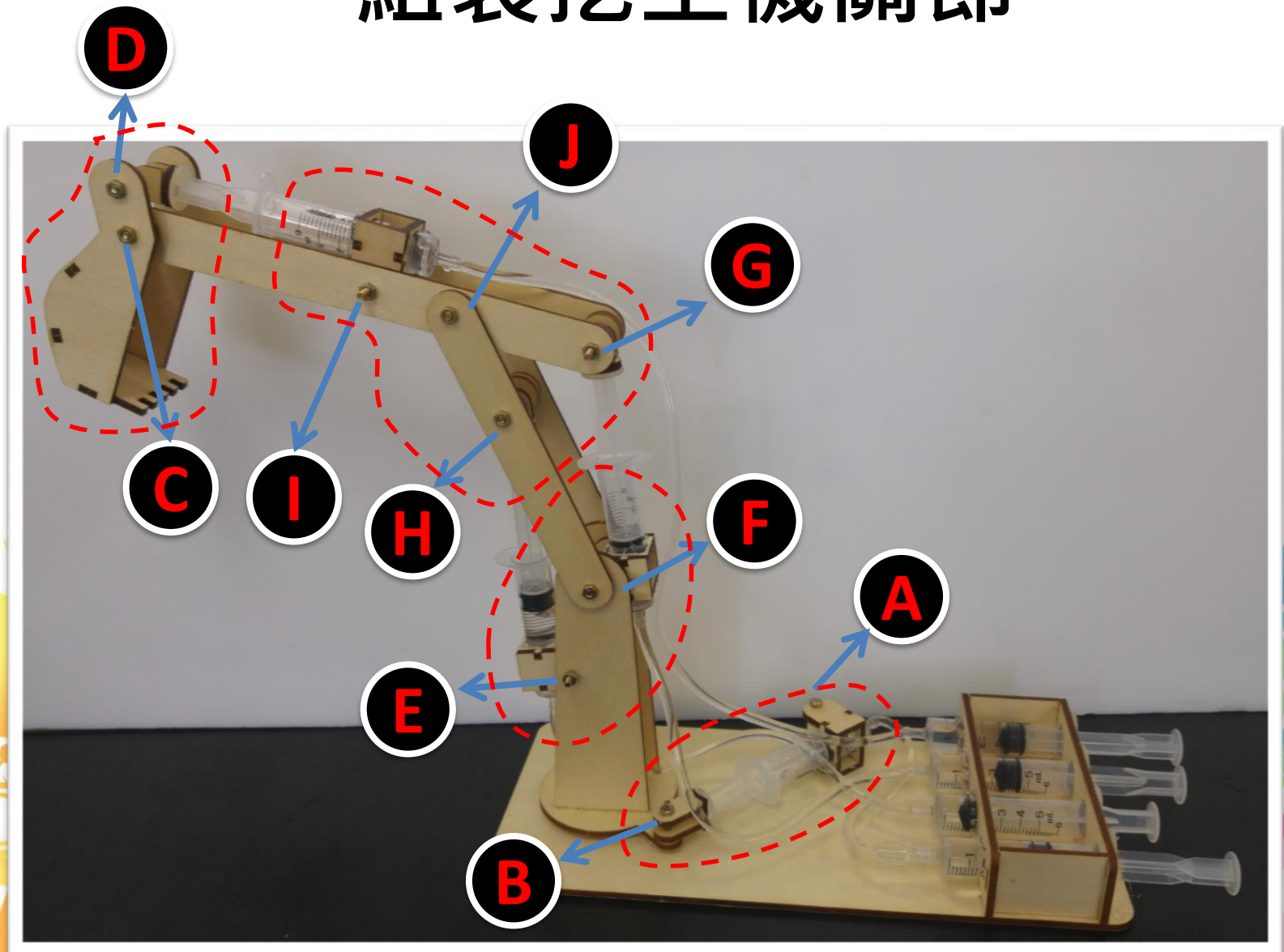
請轉直再黏合

熱熔膠先用一些

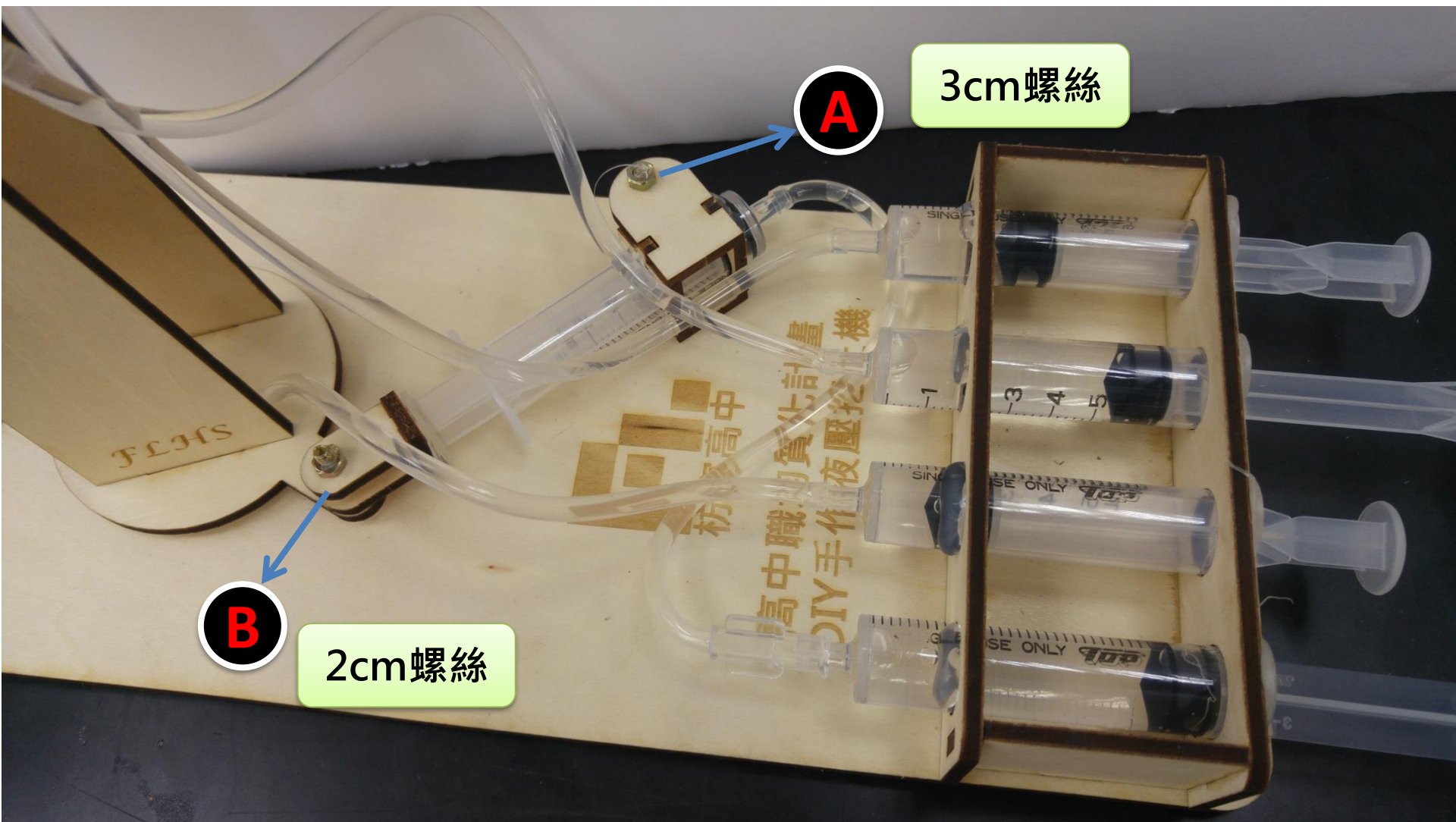


記得前面也要黏

組裝挖土機關節



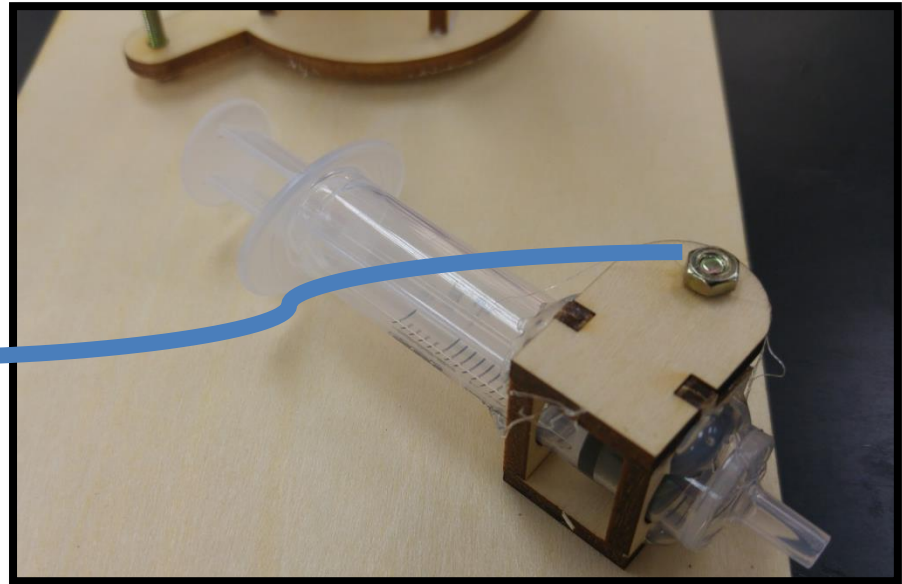
A.B兩點局部放大圖



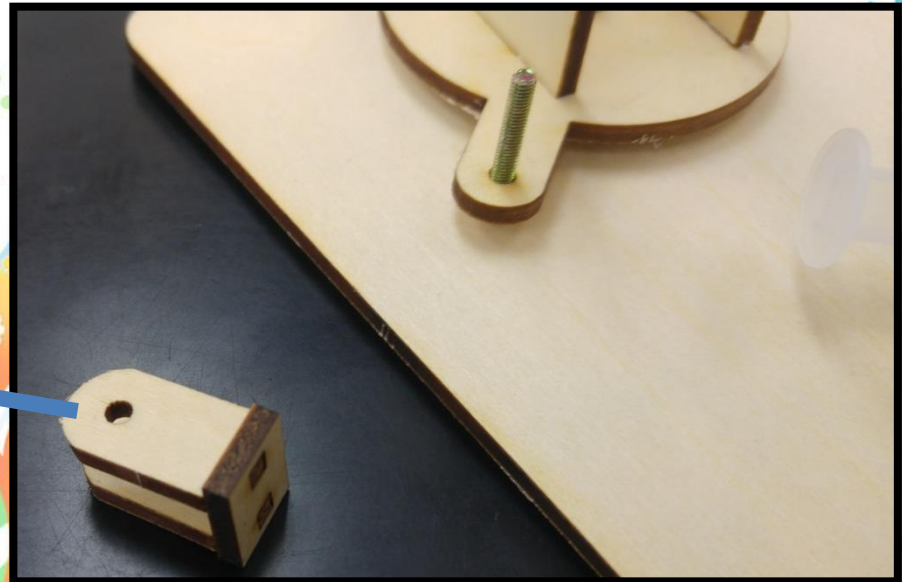


A點組裝(3cm螺絲)

用3cm螺絲從下穿過底座和液壓筒的固定環，然後鎖上螺帽。

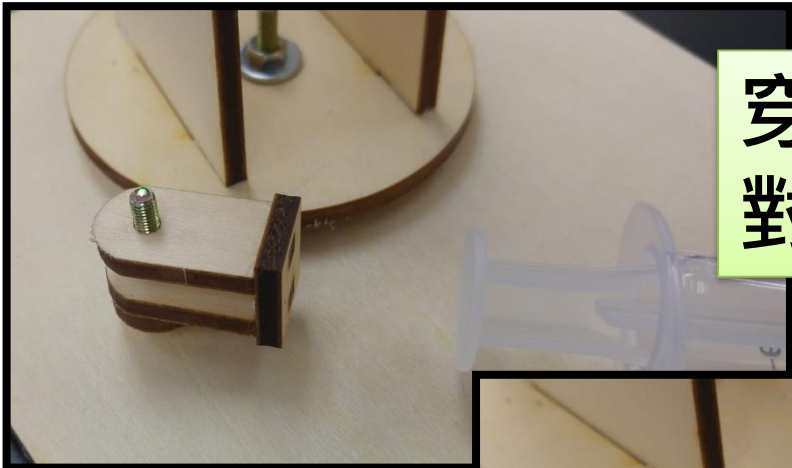


準備液壓筒長的活動環





B點組裝(熱熔膠)



穿過螺絲
對準液壓筒

A close-up photograph showing a small metal screw being inserted into a hole in a wooden component. A clear plastic hydraulic cylinder is positioned nearby, ready to be attached.

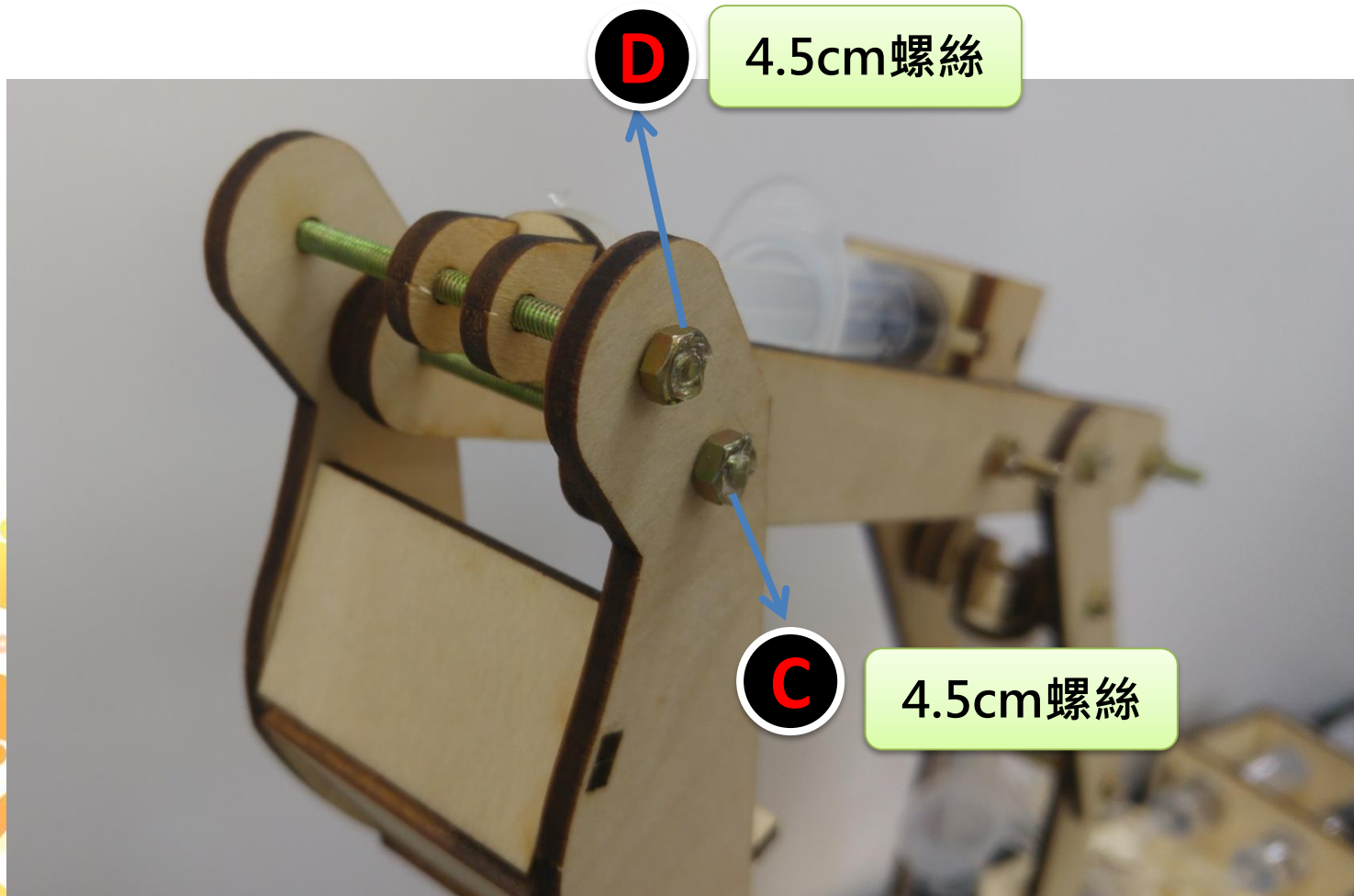
上熱熔膠

A close-up photograph showing a hot glue gun applying a bead of clear adhesive to the joint between the wooden component and the plastic cylinder.

鎖螺帽

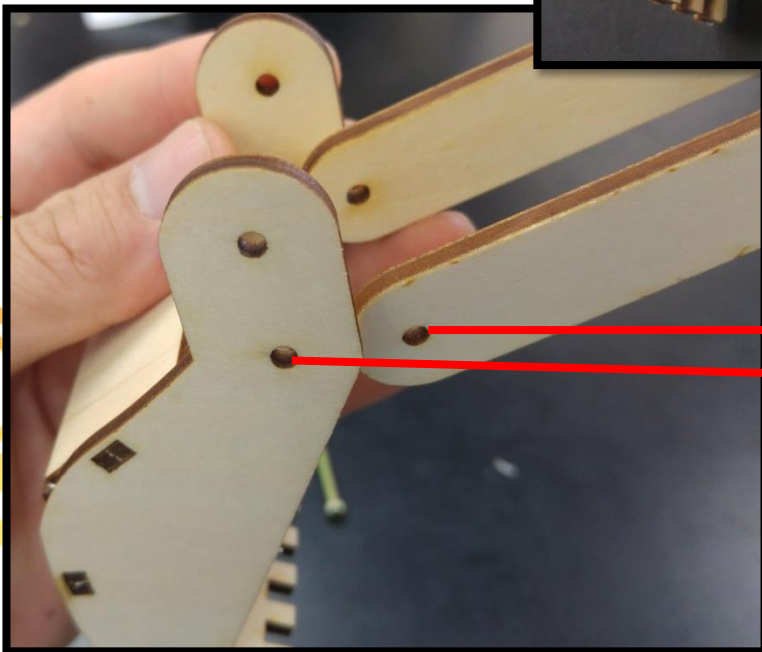
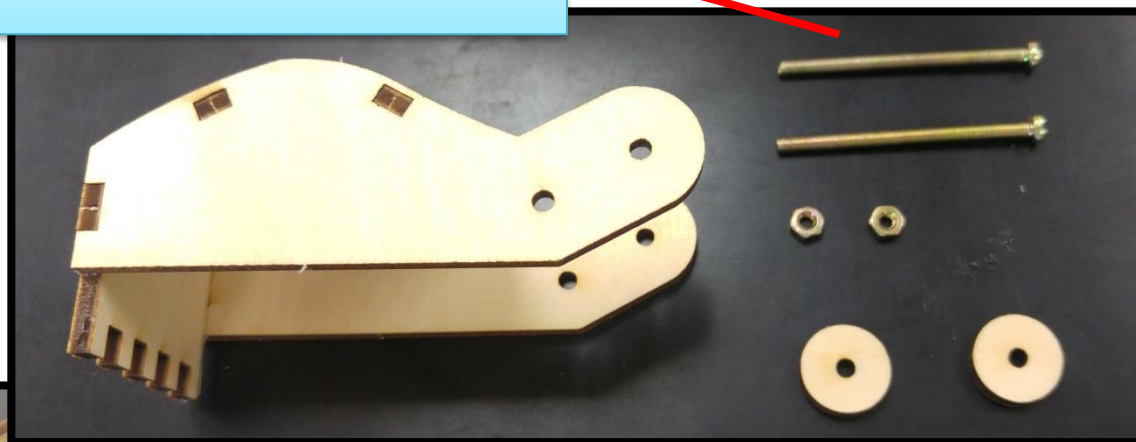
A close-up photograph showing a hexagonal nut being tightened onto the screw, securing the plastic cylinder to the wooden component.

C.D兩點局部放大圖



C點組裝(4.5cm螺絲)-1

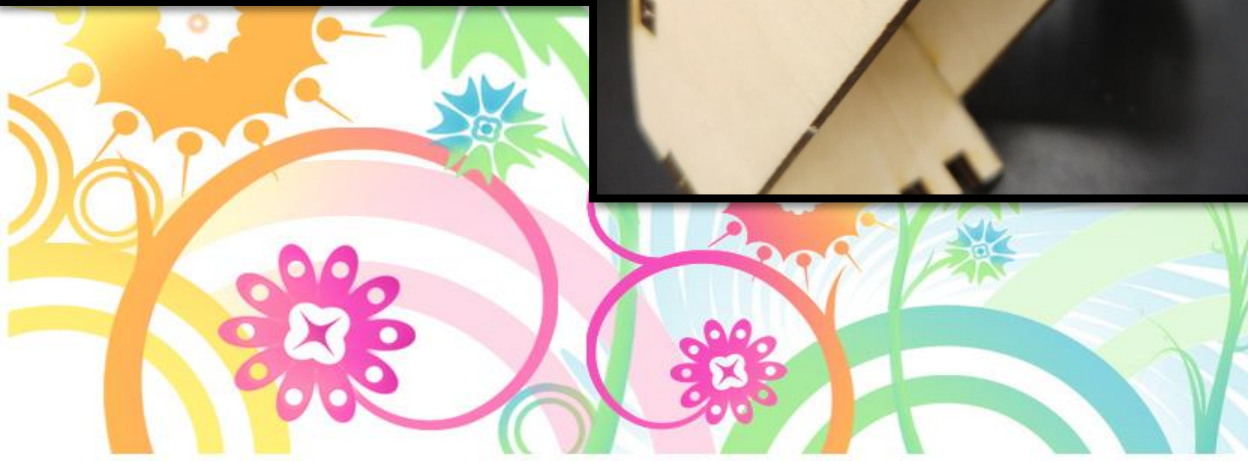
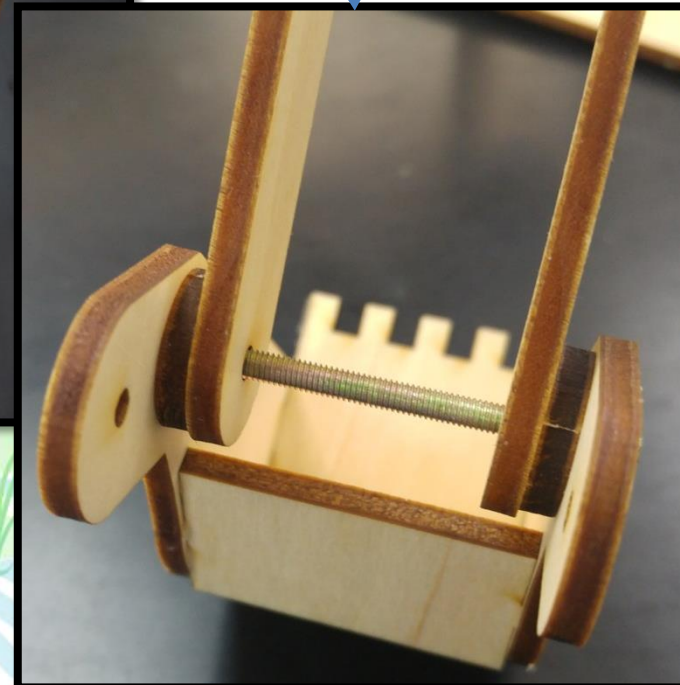
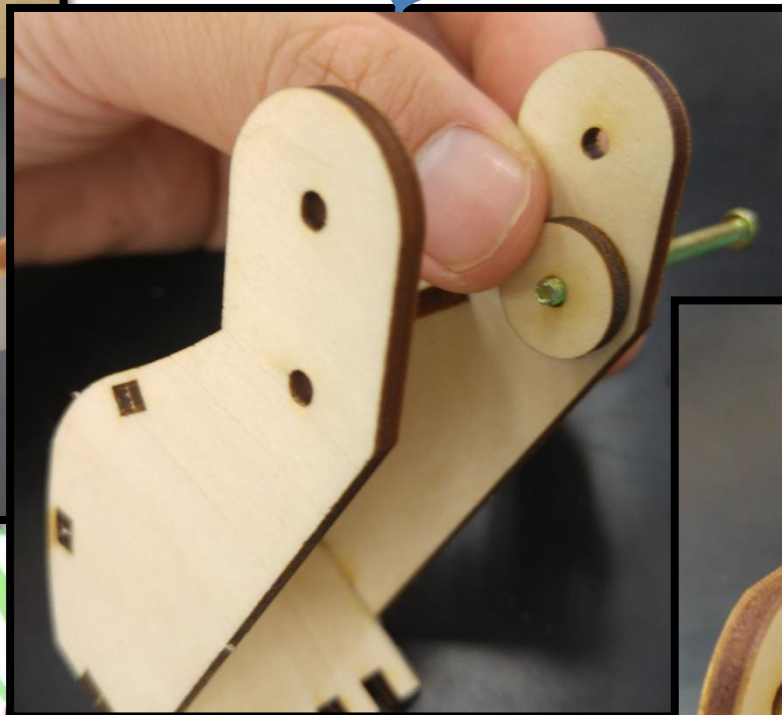
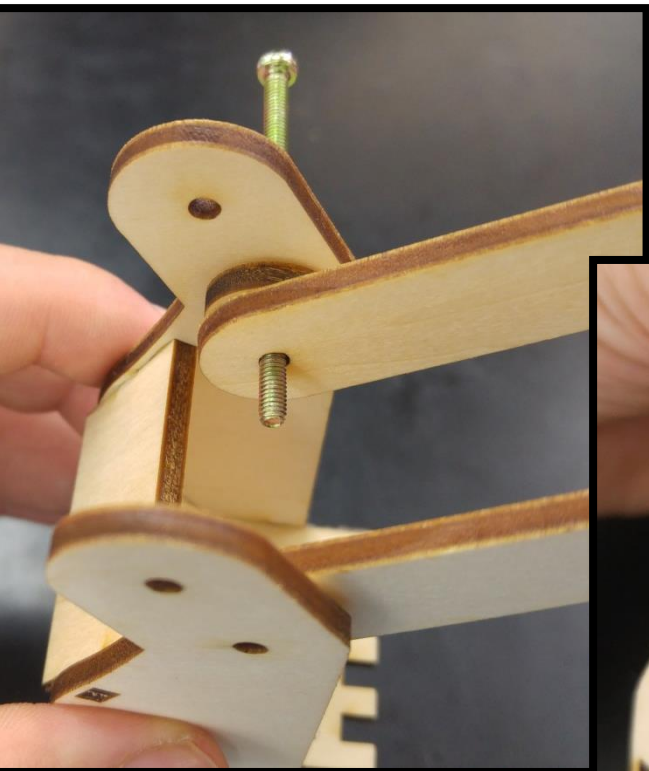
兩支螺絲都是最長的(4.5cm)



螺絲要同時穿過的孔位

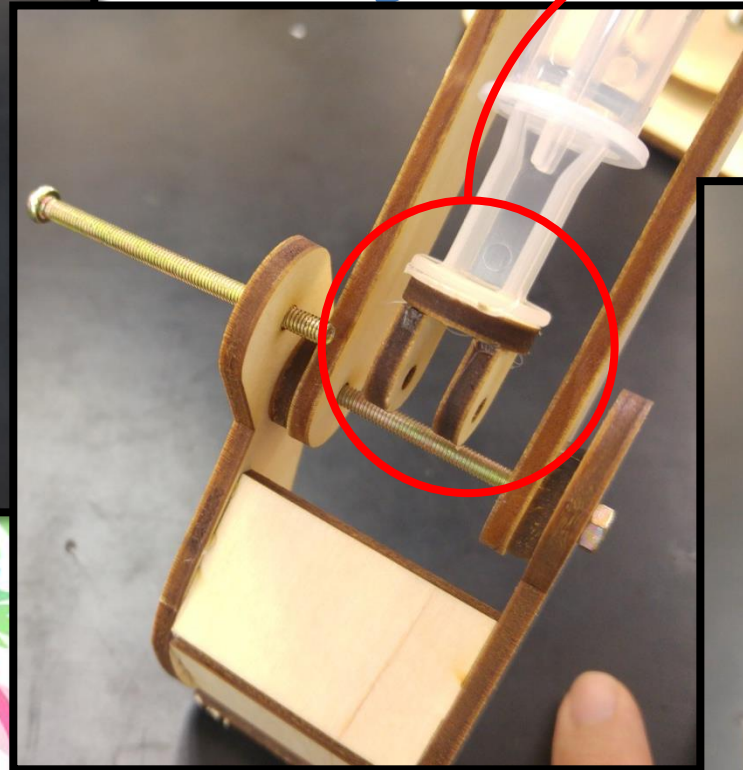
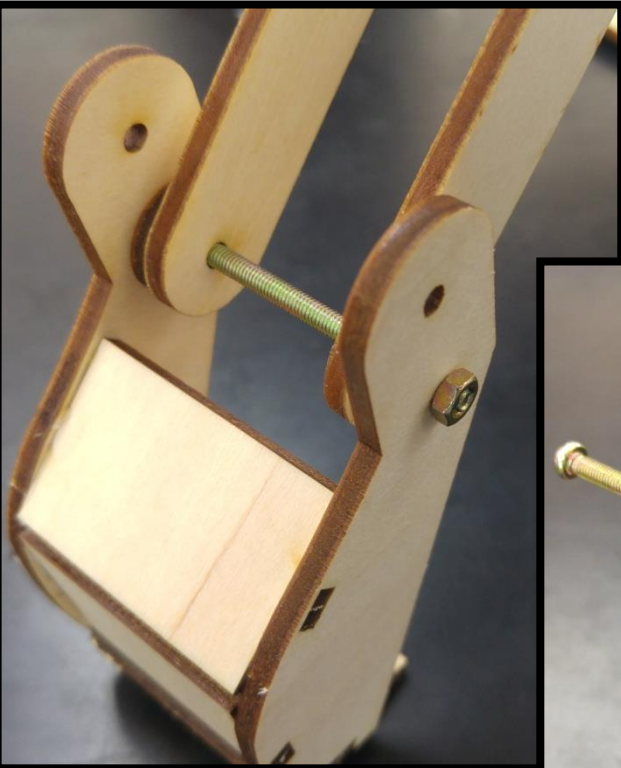


C點組裝(4.5cm螺絲)-2

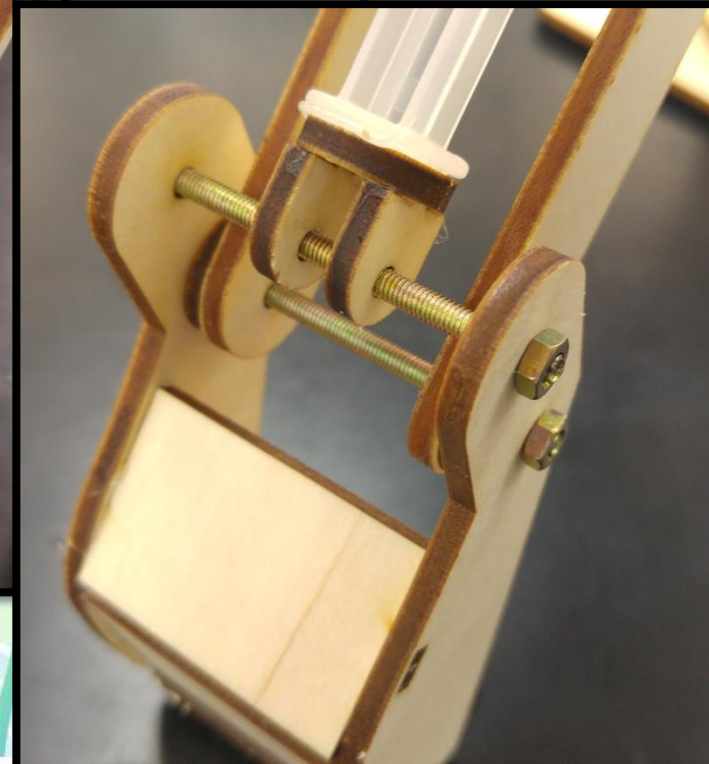




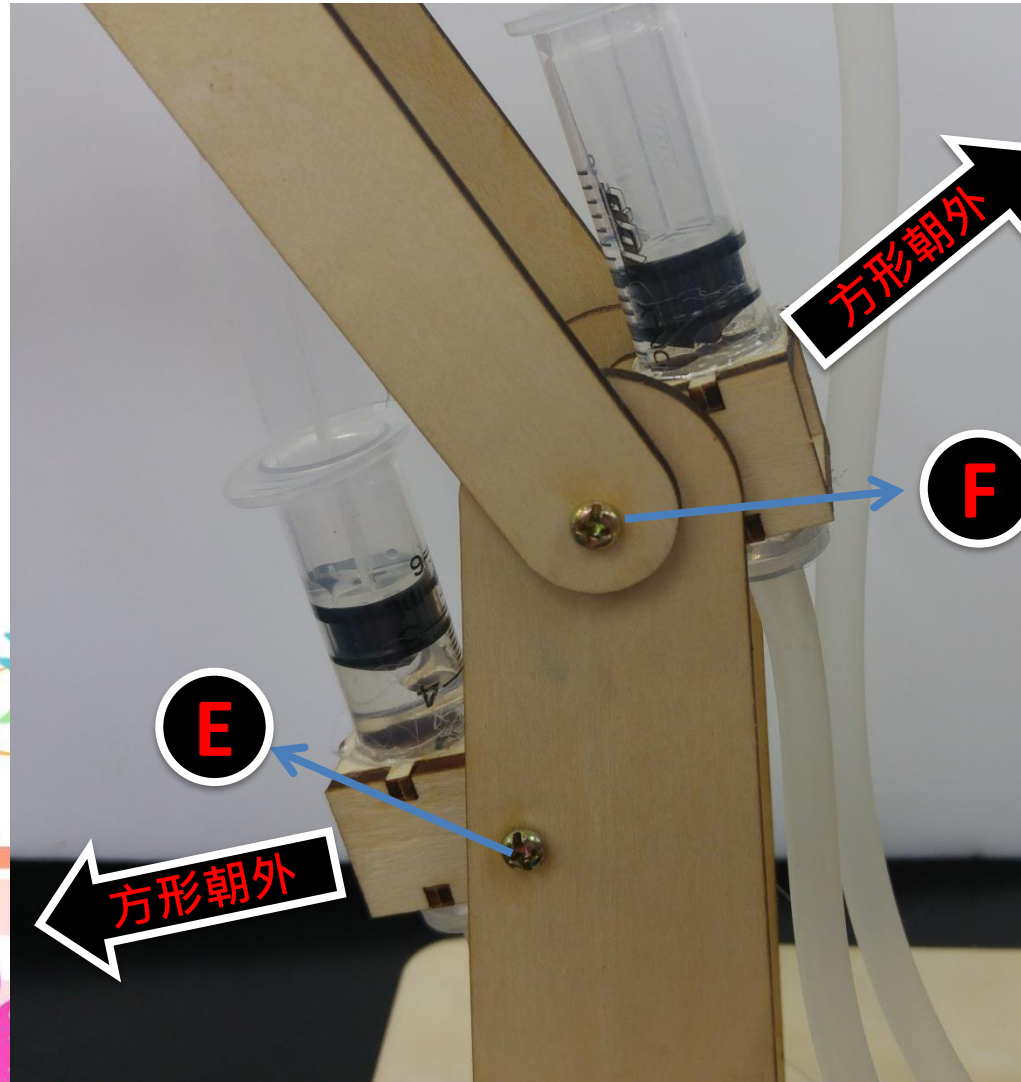
D點組裝(4.5cm螺絲)



活動環往下凸
約2mm的地方
要朝下



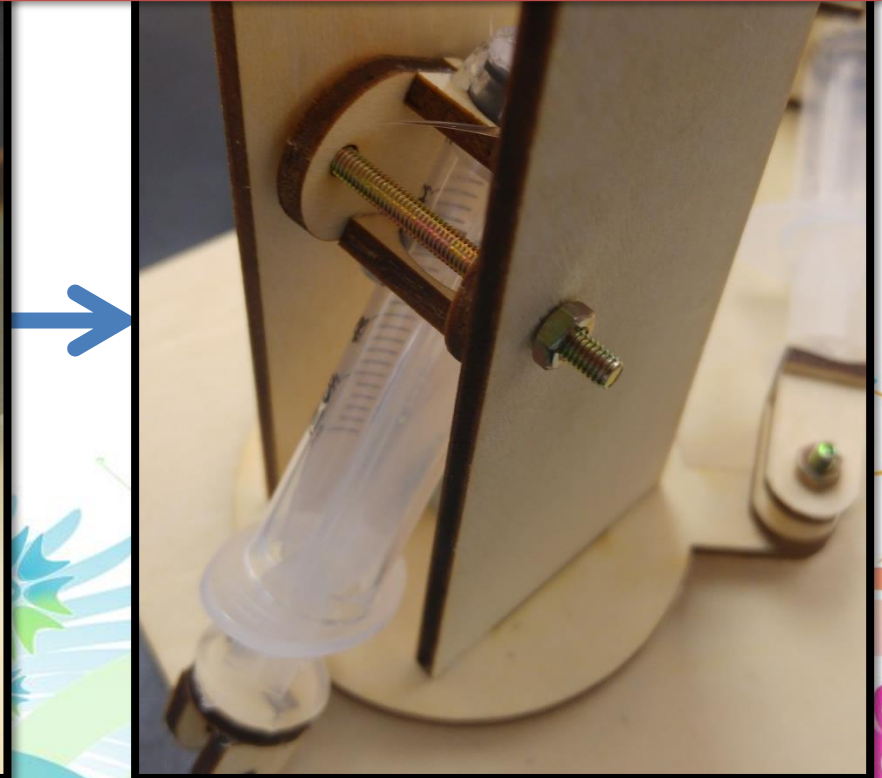
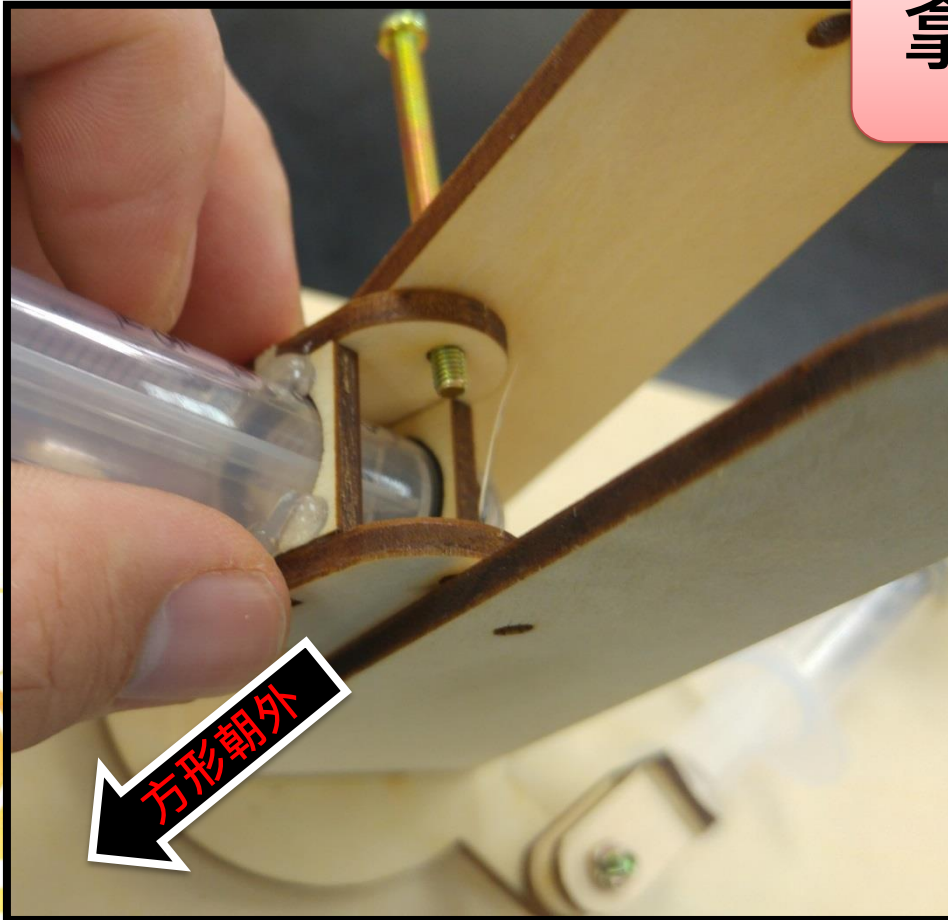
E.F兩點局部放大圖



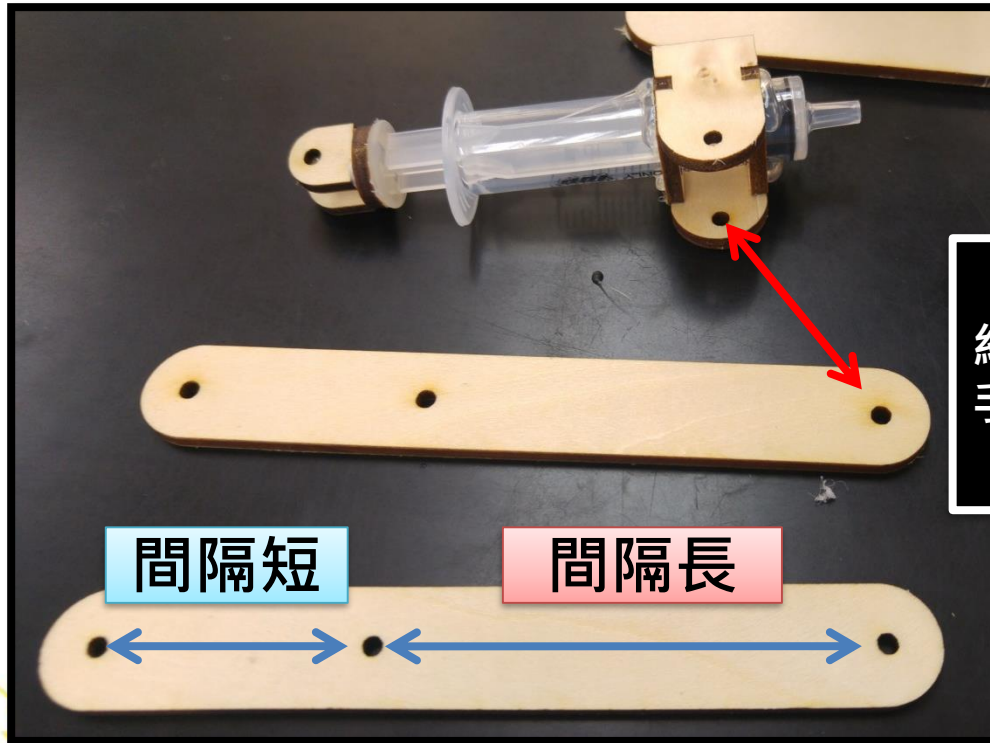


E點組裝(4cm螺絲)

拿接20cm管子的液壓筒



F點組裝-1 (4cm螺絲)



組裝順序：
手臂→旋轉軸→活動環→旋轉軸→手臂

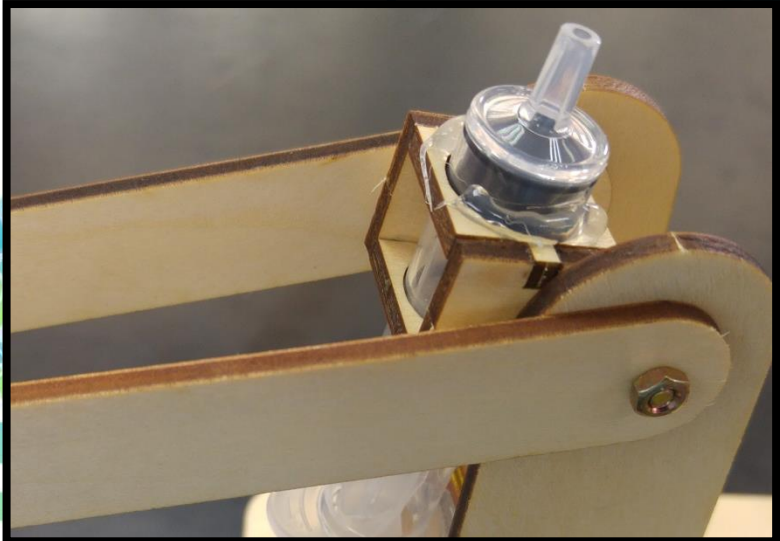
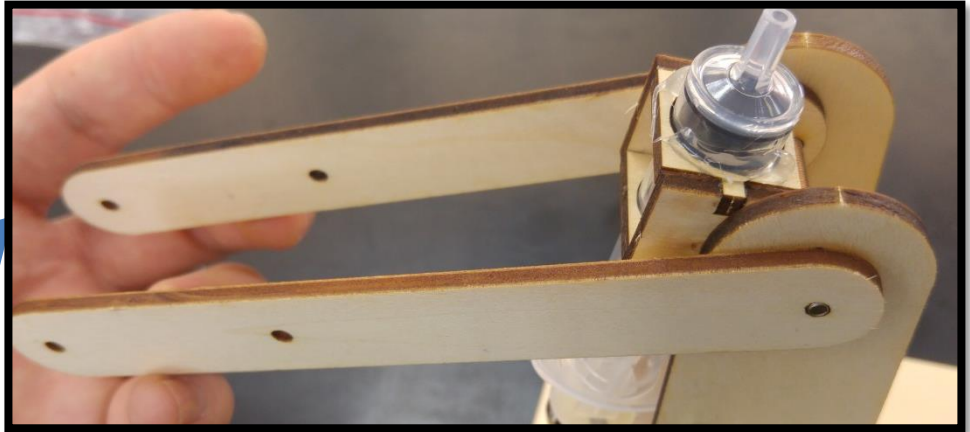
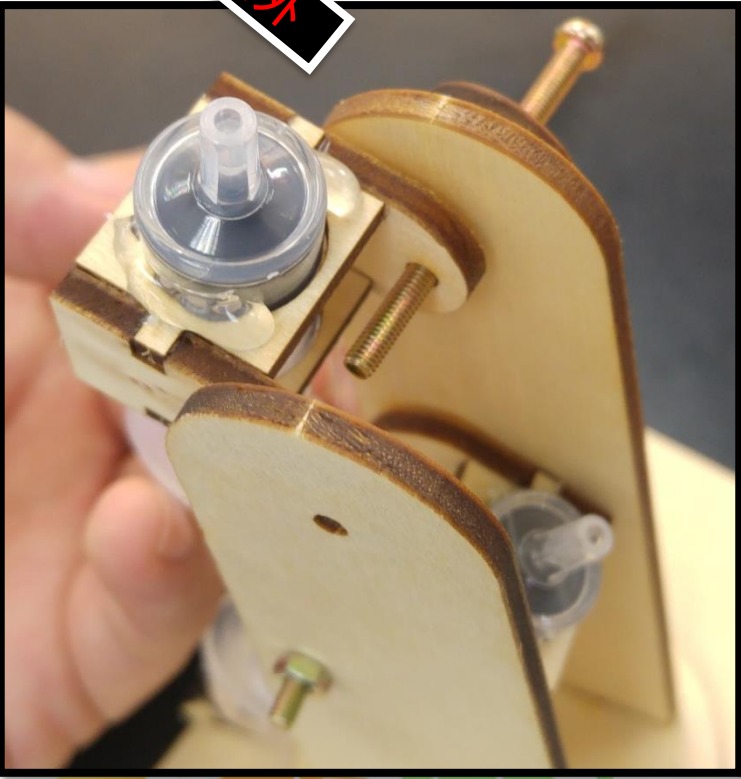
拿接20cm管子的液壓筒



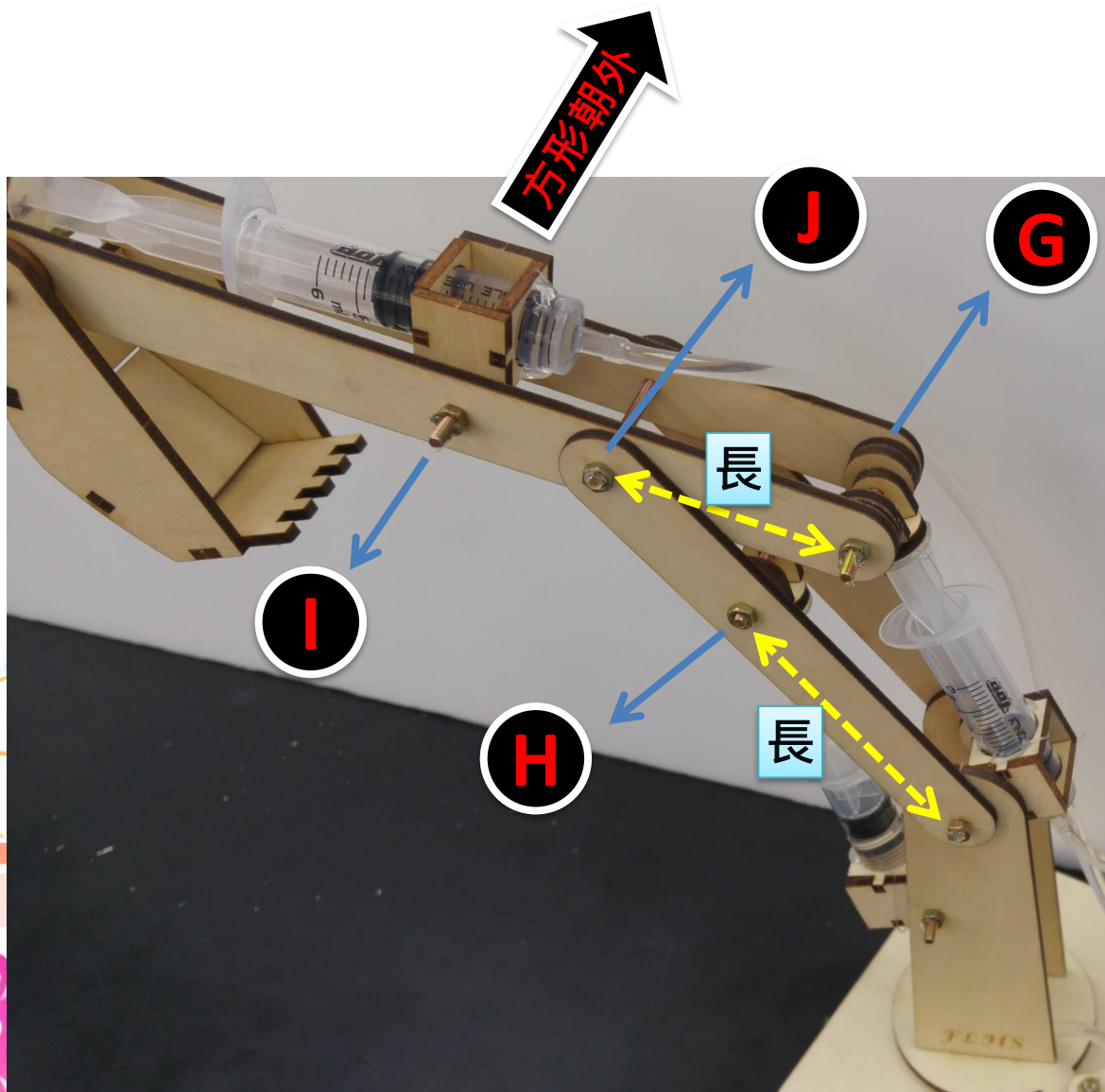


F點組裝-2 (4cm螺絲)

方形朝外



G.H.I.J兩點局部放大圖

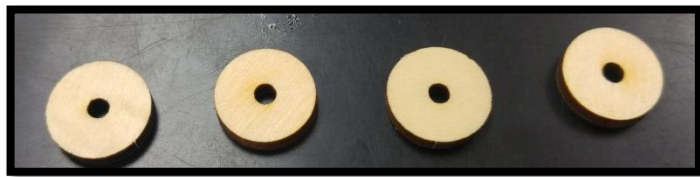




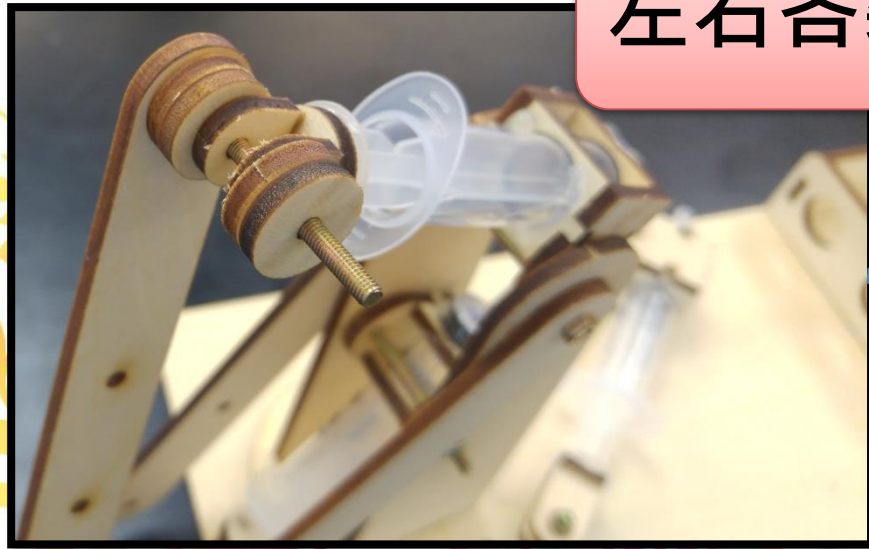
G點組裝 (4cm螺絲)



最長的手臂

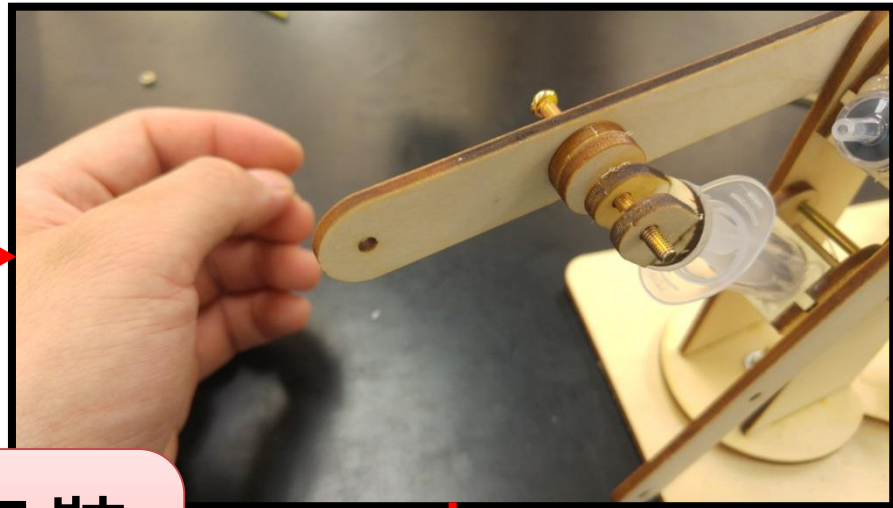


左右各裝兩個墊片

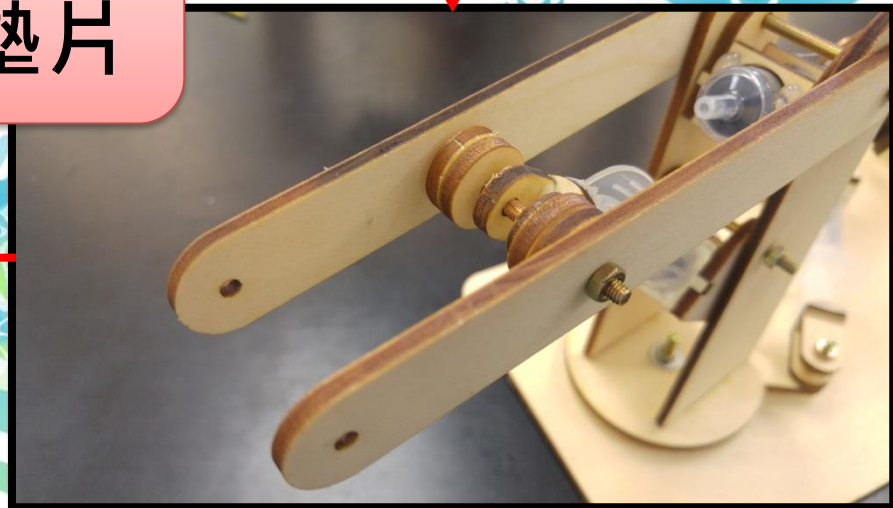
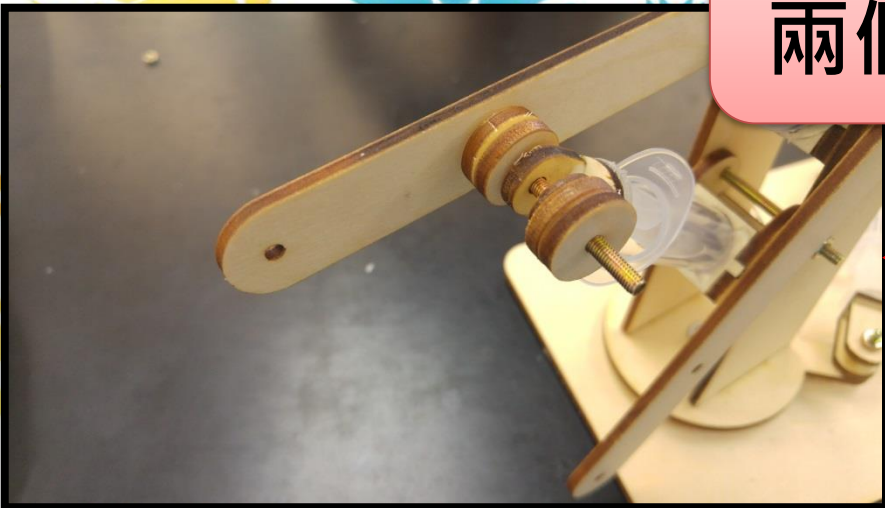




H點組裝(4cm螺絲)



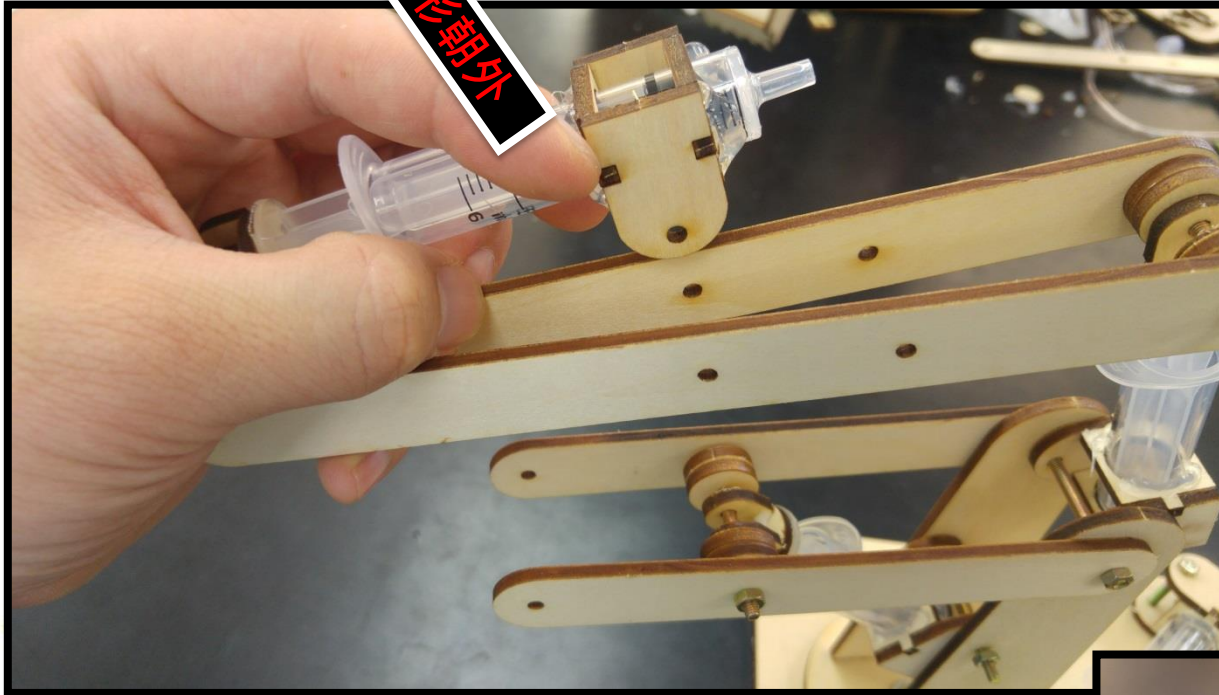
左右各裝
兩個墊片





1點組裝(4cm螺絲)

方形朝外

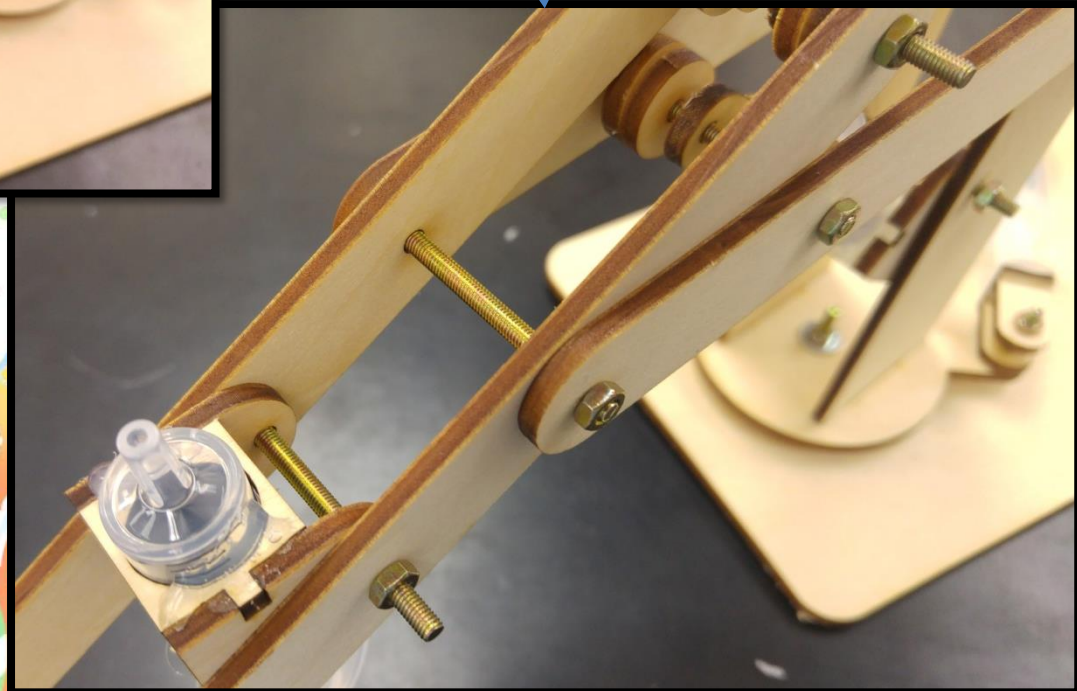
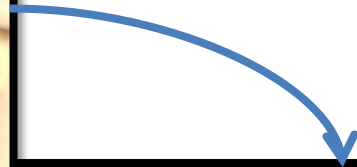
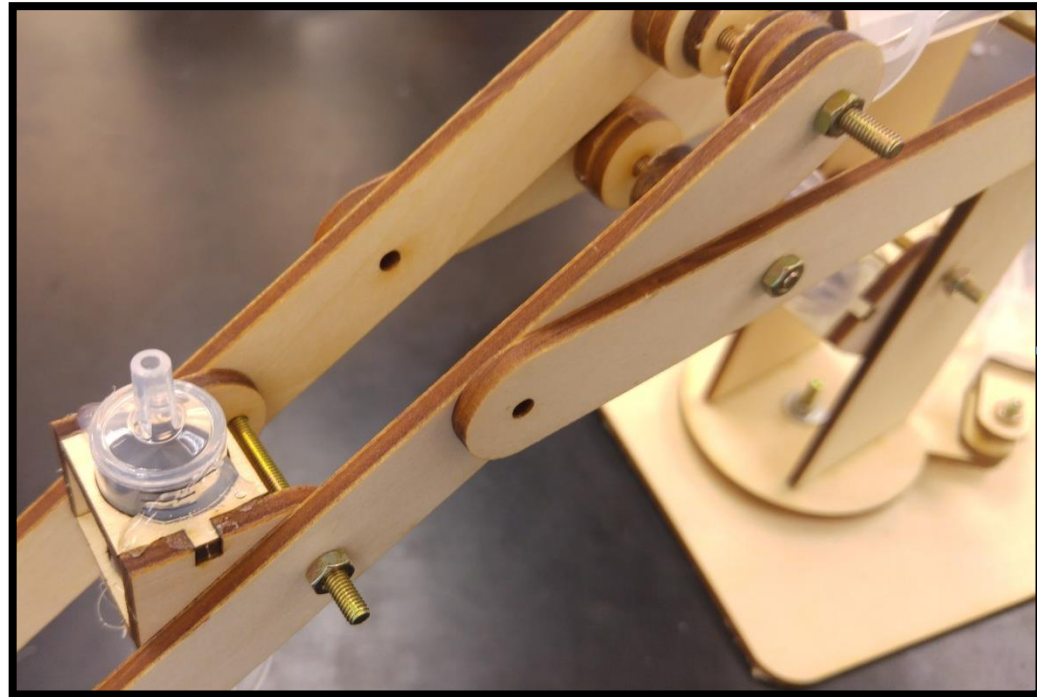


拿接35cm管子的液壓管，
就是活動環有黏比較下面
的那一支。





J點組裝(4cm螺絲)



測試挖土機

- 控制挖斗時，液壓筒推到中間已經是極限，不要硬推以免造成損壞。
- 記得所有螺帽都是鬆的，請勿鎖太緊。
- 如果一切測試都OK，請將螺帽上熱熔膠，以免日後鬆脫。



最後別忘了
上膠喔

完工影片

