Ramp Walking Toys

照片來源：Tony Slattery

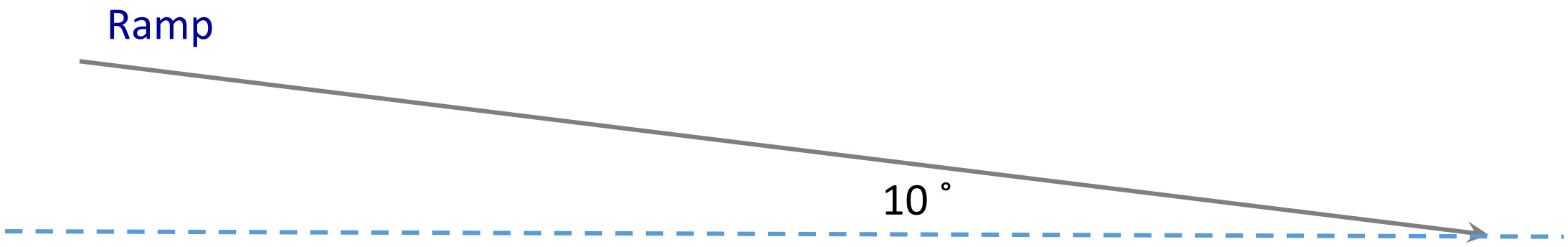
網站：https://www.lumberjocks.com/MagicSawDust/blog/59162

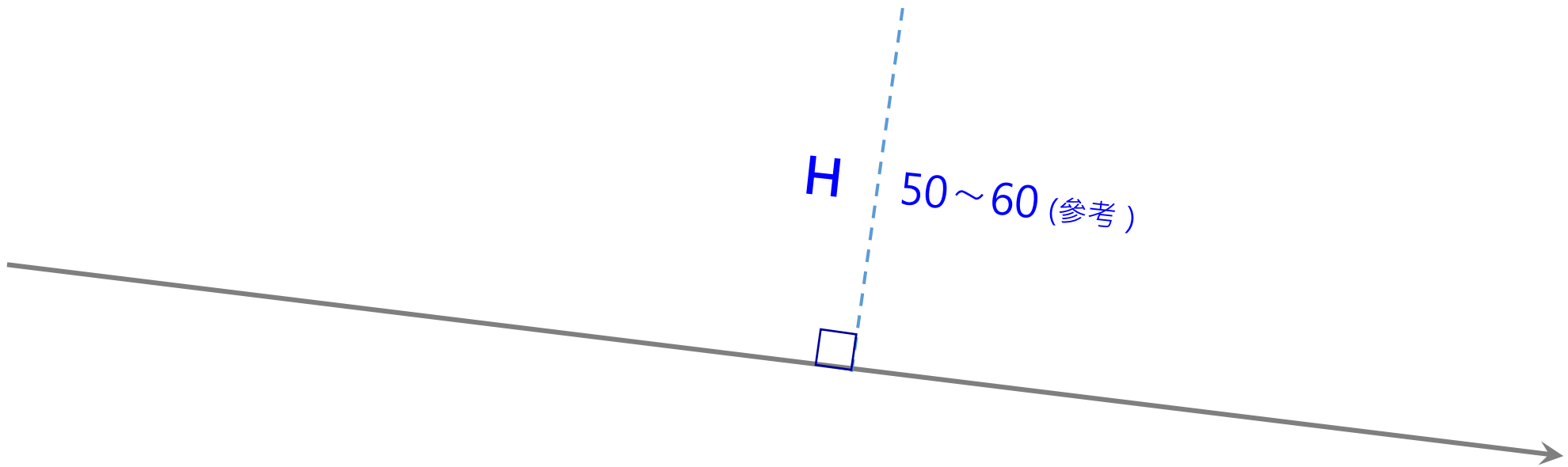
本體 重力

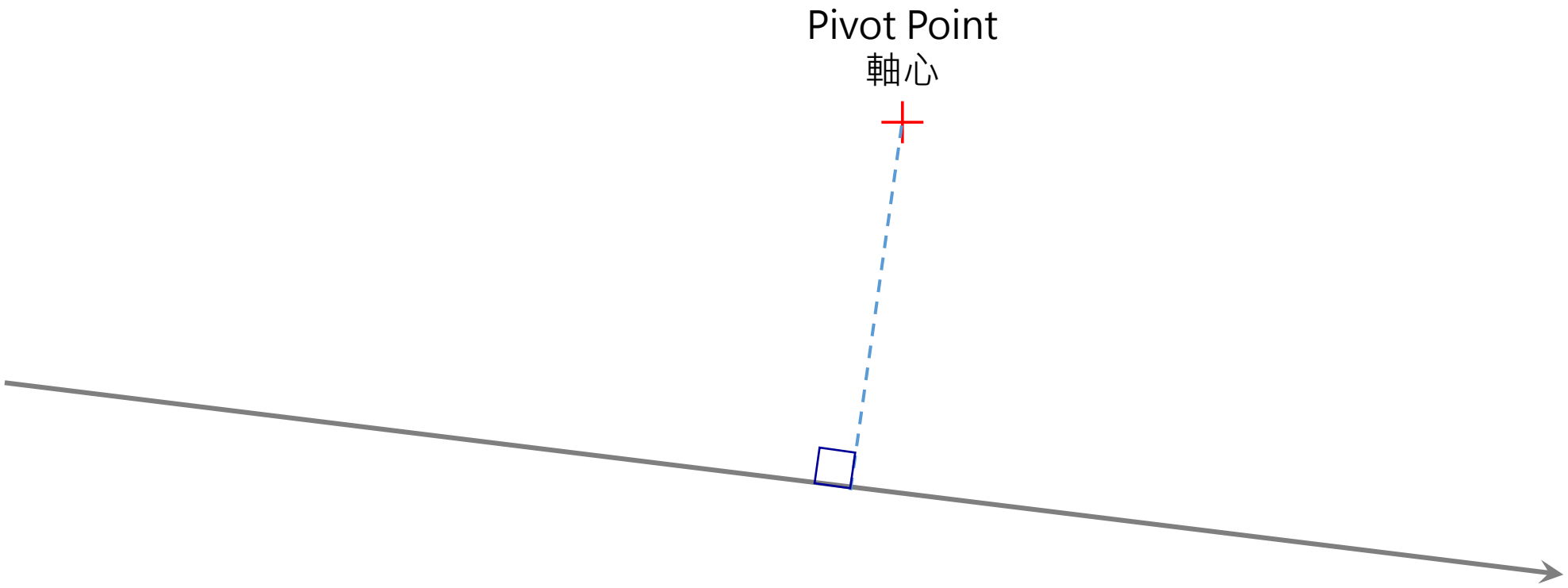
＋

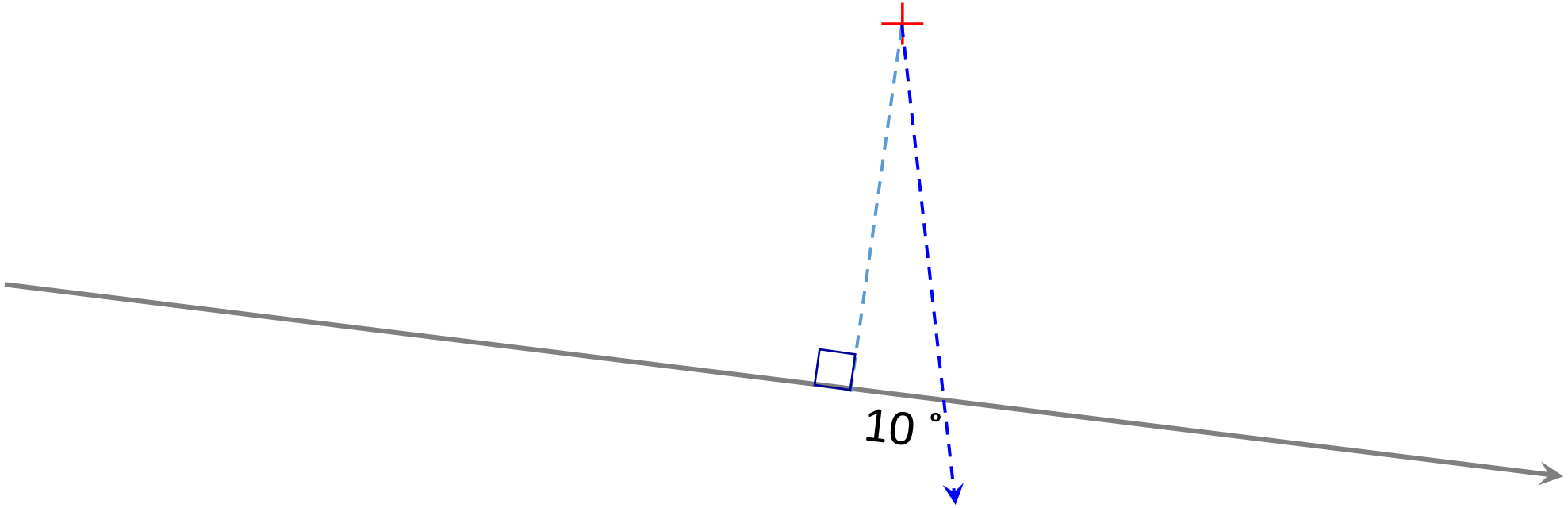
斜面 摩擦力

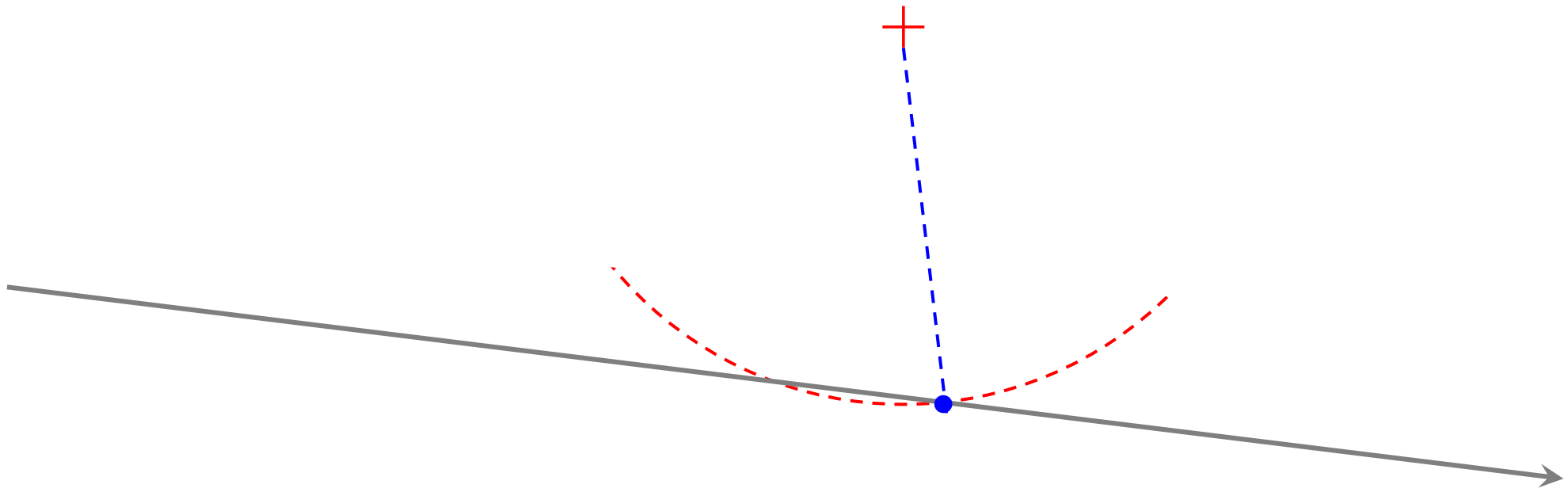
桌面

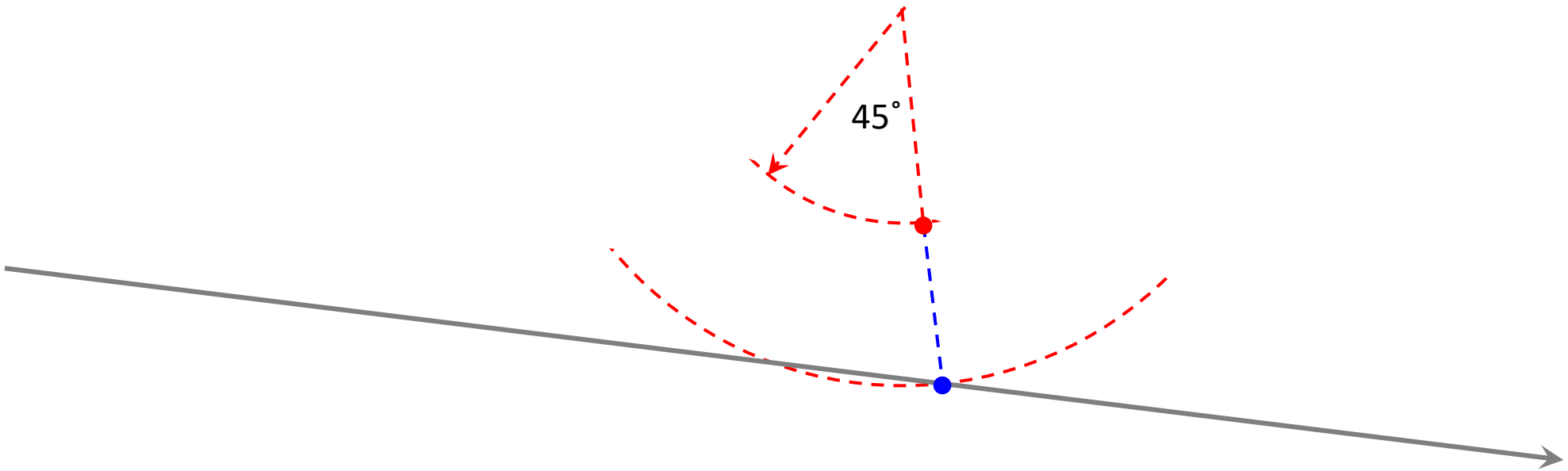

Ramp
10 °


H
50～60 (参考)


Pivot Point
軸心


10 °

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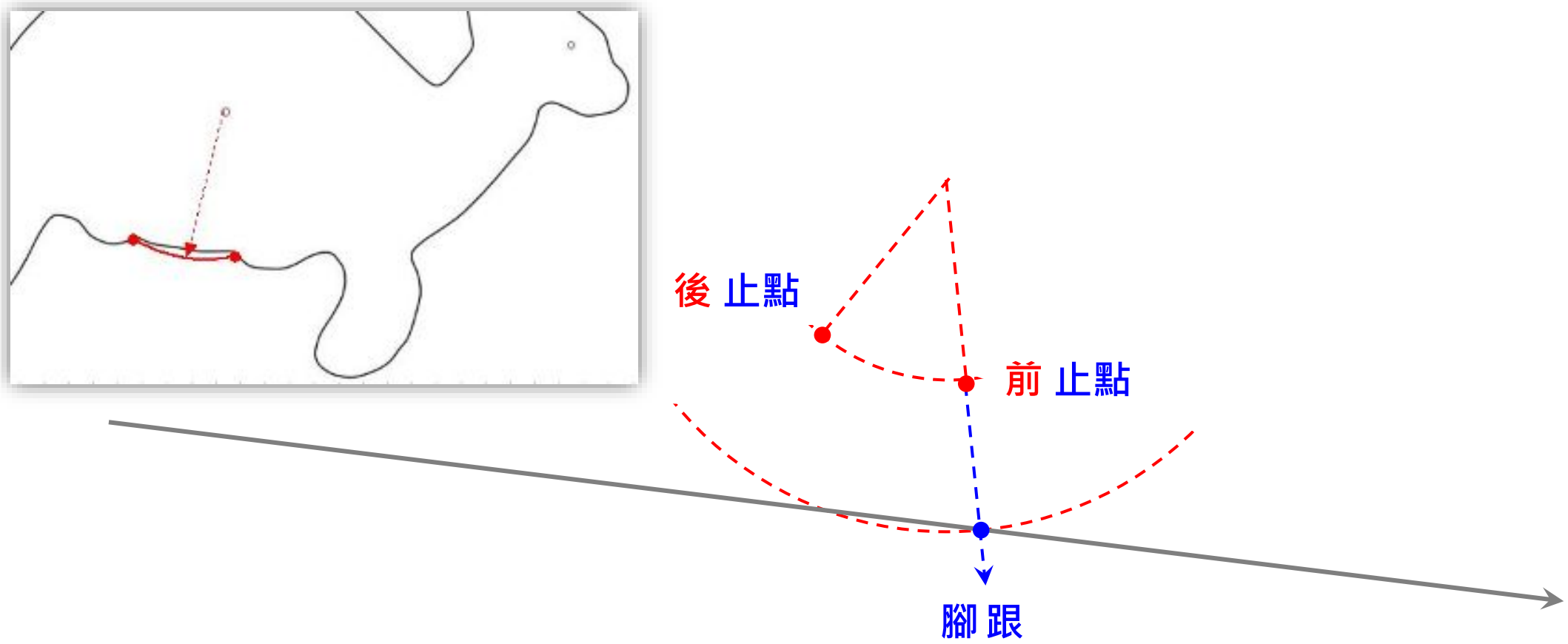
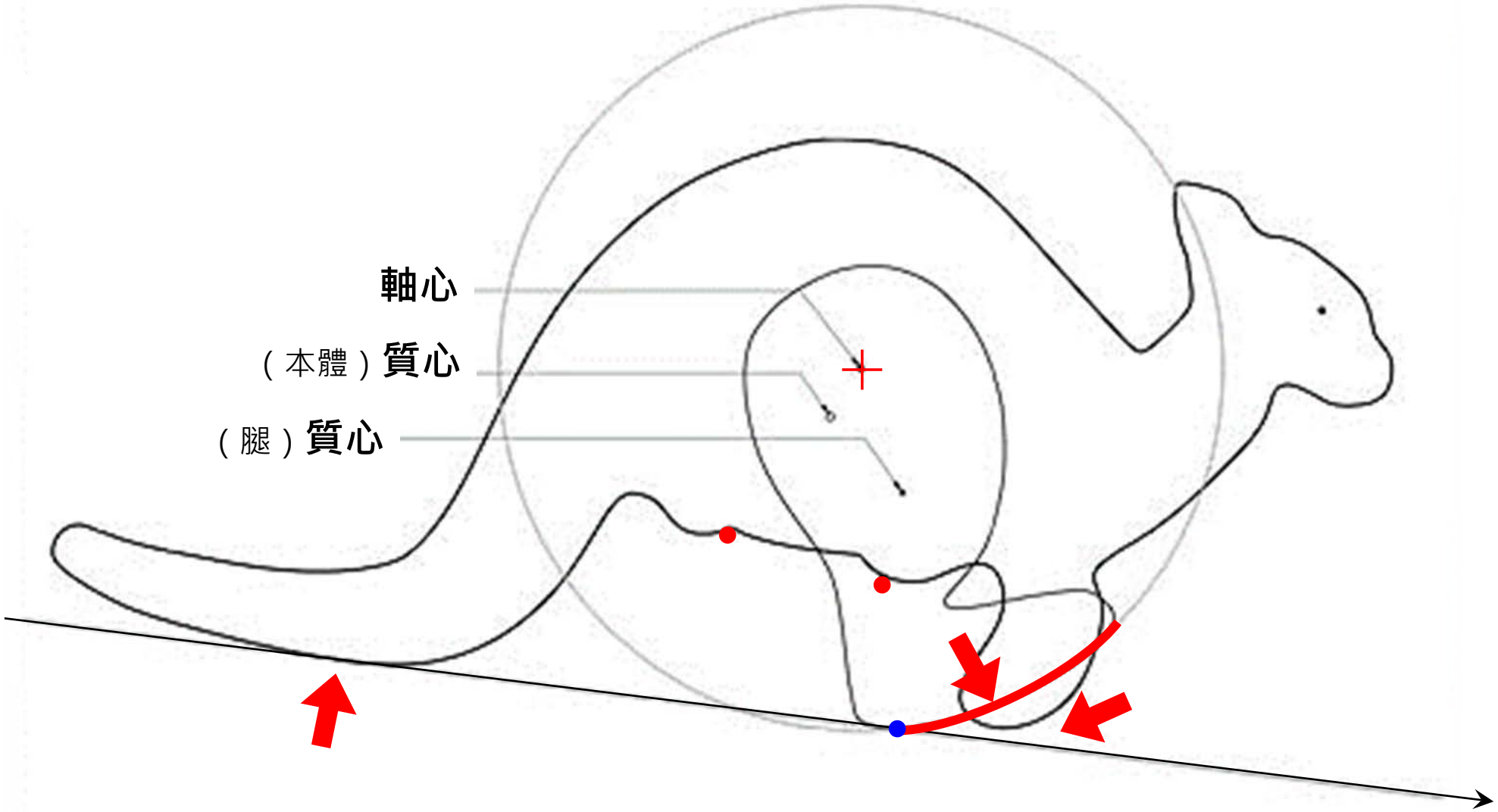

後 止點
前 止點
腳 跟


軸心
（本體）質心
（腿）質心

如何找（本體）質心 Center of Mass？

使用材料：

輔助治具 Jig

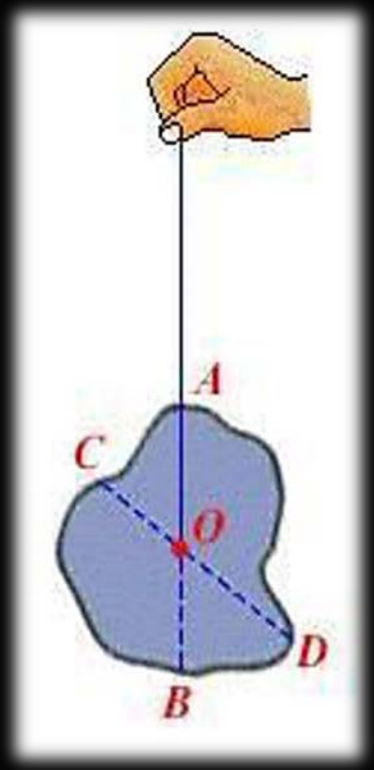
.5mm鉛筆、直角規、直尺

棉線、紙膠帶

懸掛法 垂線找質心

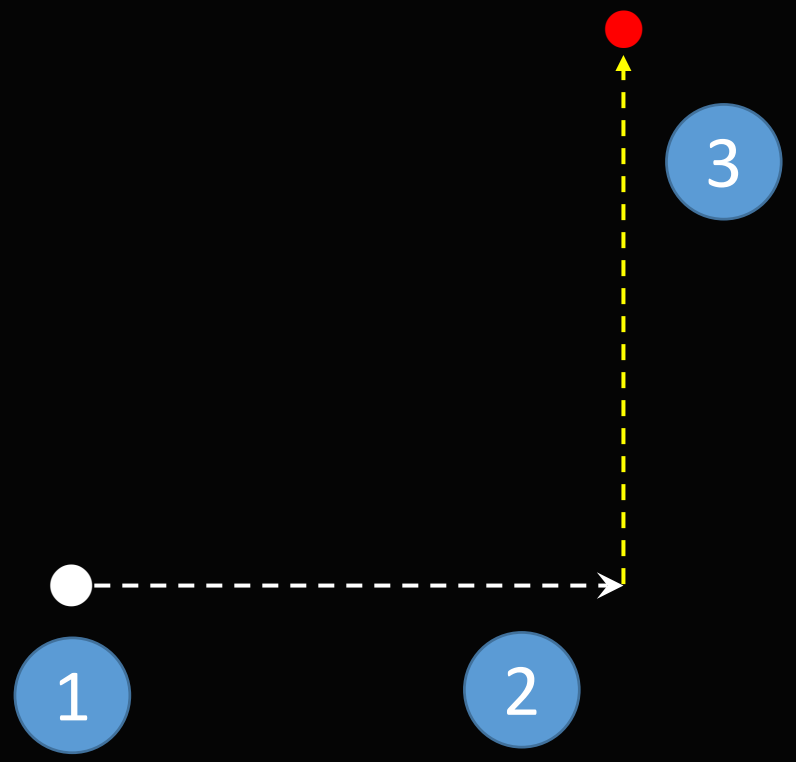
...僅適用於「**薄板物**」。

1. 使用「棉線、紙膠帶」固定於本體之測點 1。
2. 待本體「靜止」後，再畫「垂線 AB」。
3. 於測點 2，重複動作 1+2 ，再畫「垂線 CD 」。
4. 垂線 AB、CD的「交點」，就是質心。



如何找 **軸心** ● 位置？

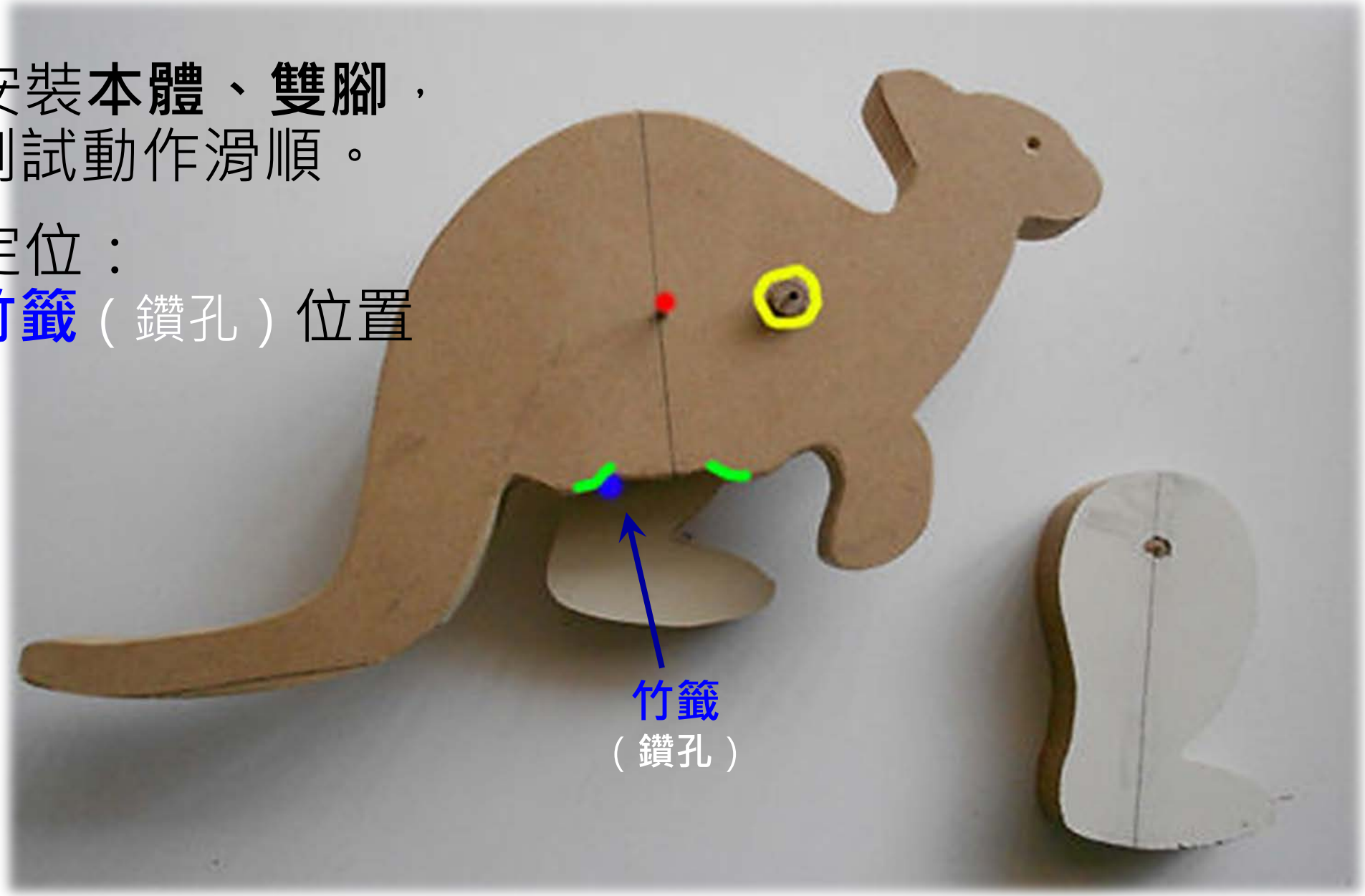
1. 先確定本體的質心●位置。
2. 依本體預設前進方向→5 mm 。
3. 以垂線往上↑5 mm 。



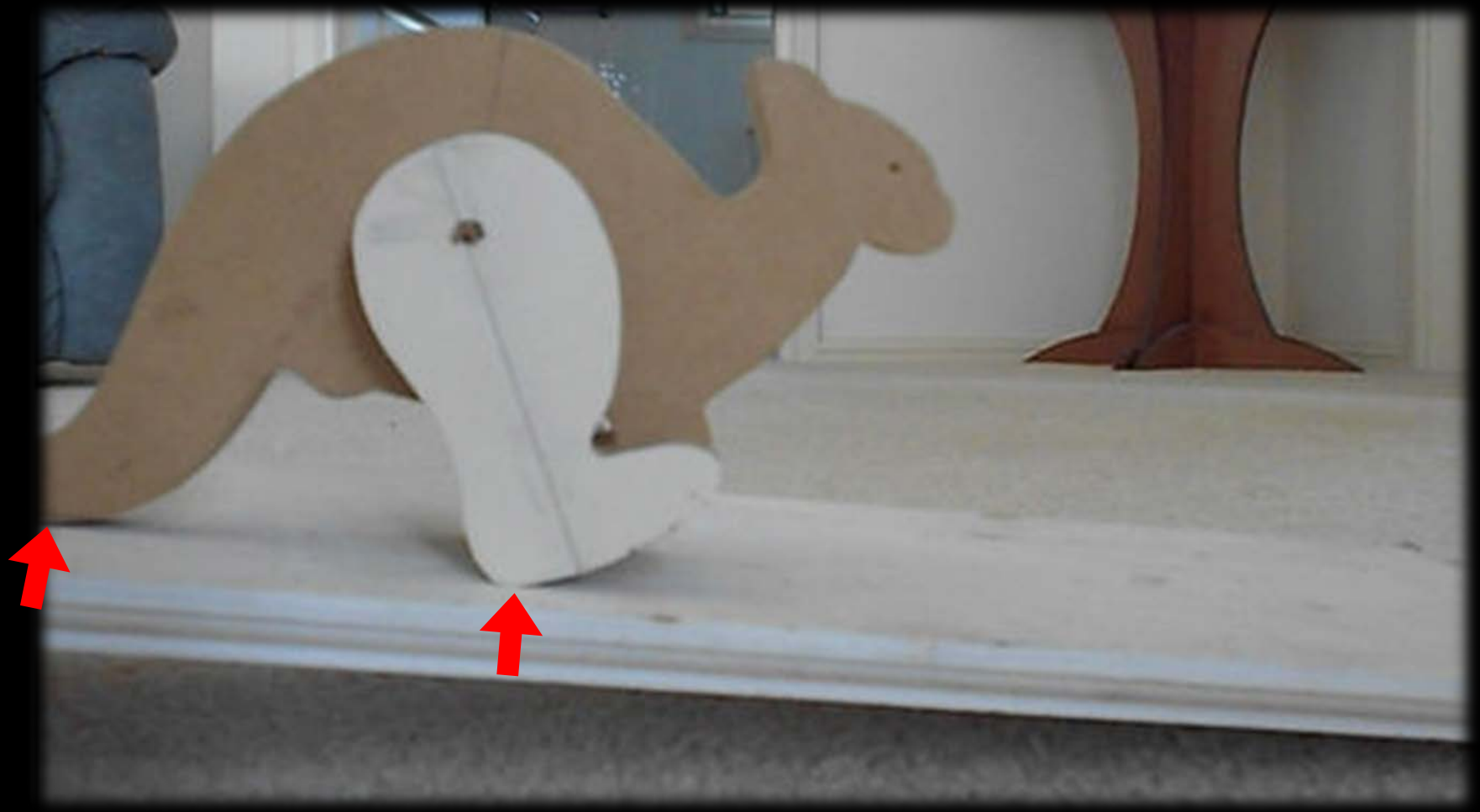
如何串接（本體＋腿）？

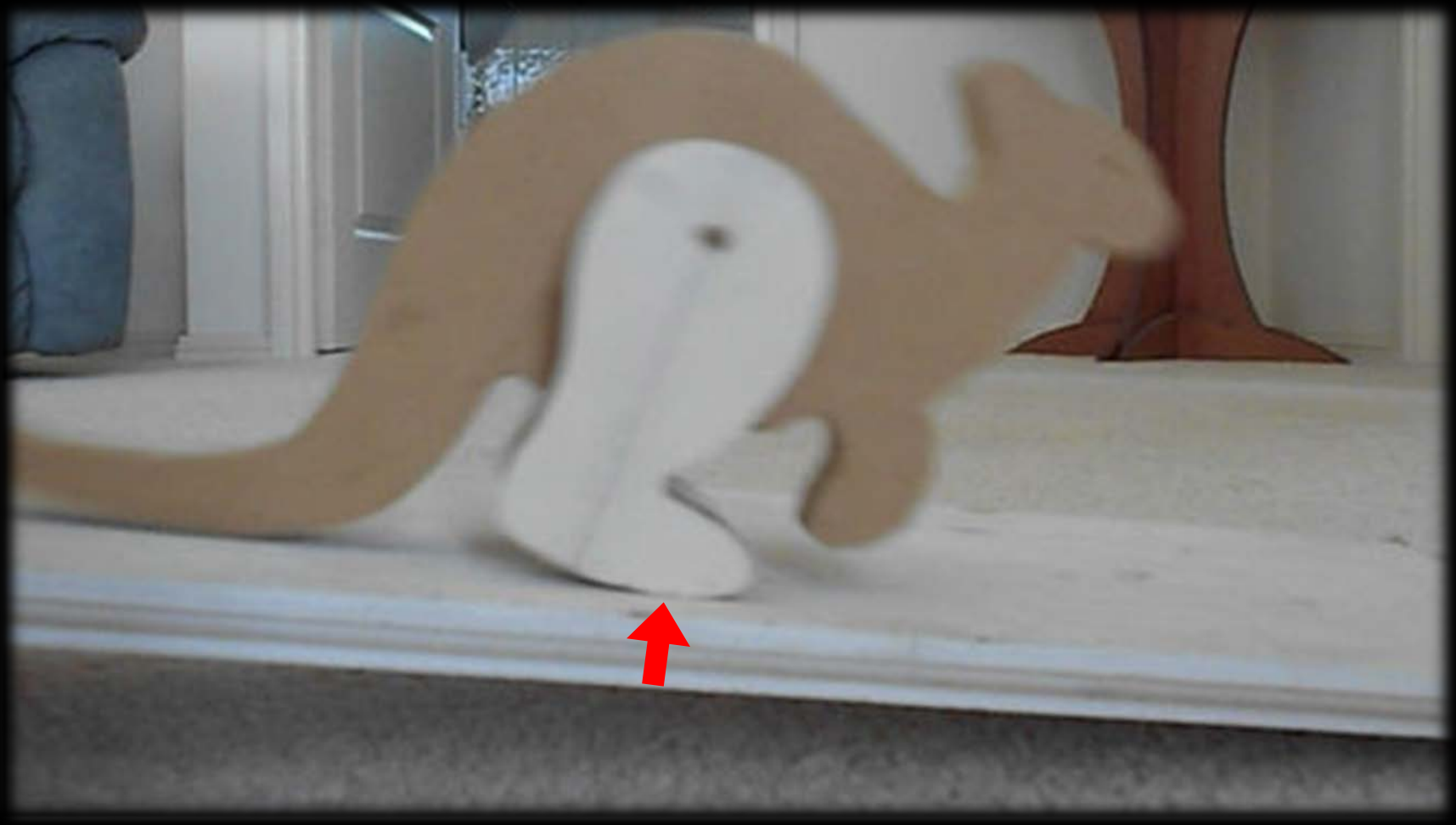
1、安裝**本體、雙腳**，
測試動作滑順。

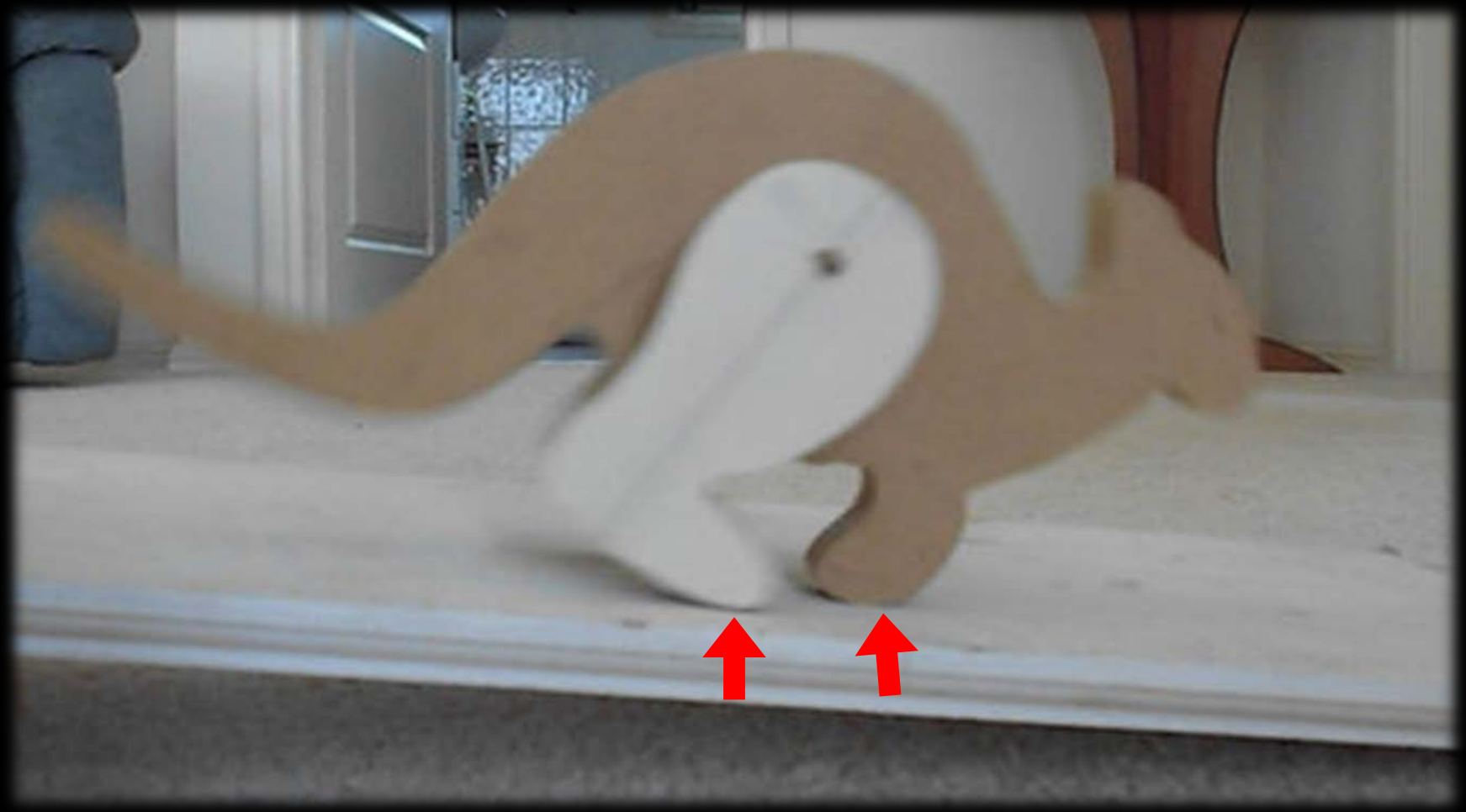
2、定位：
竹籤（鑽孔）位置

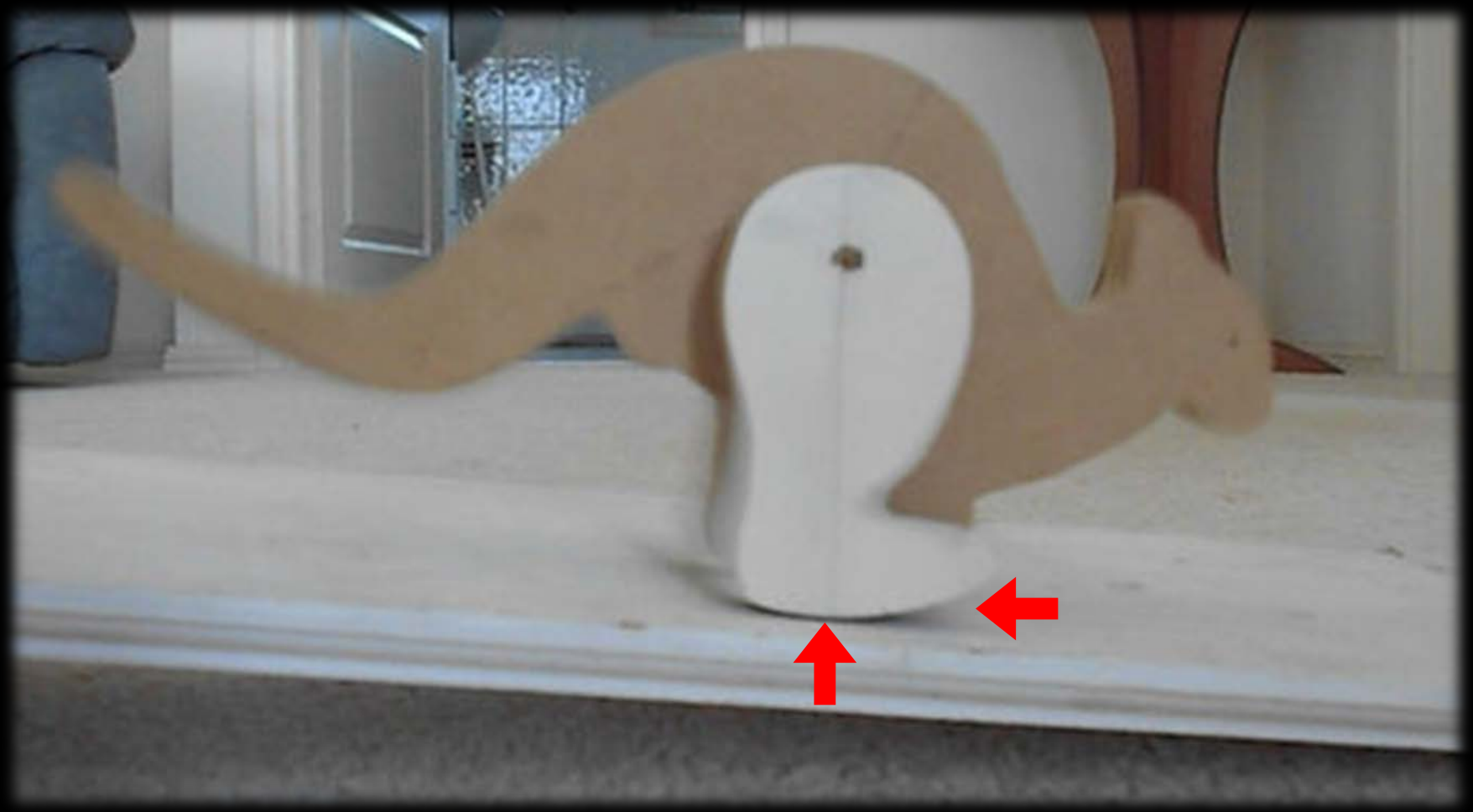


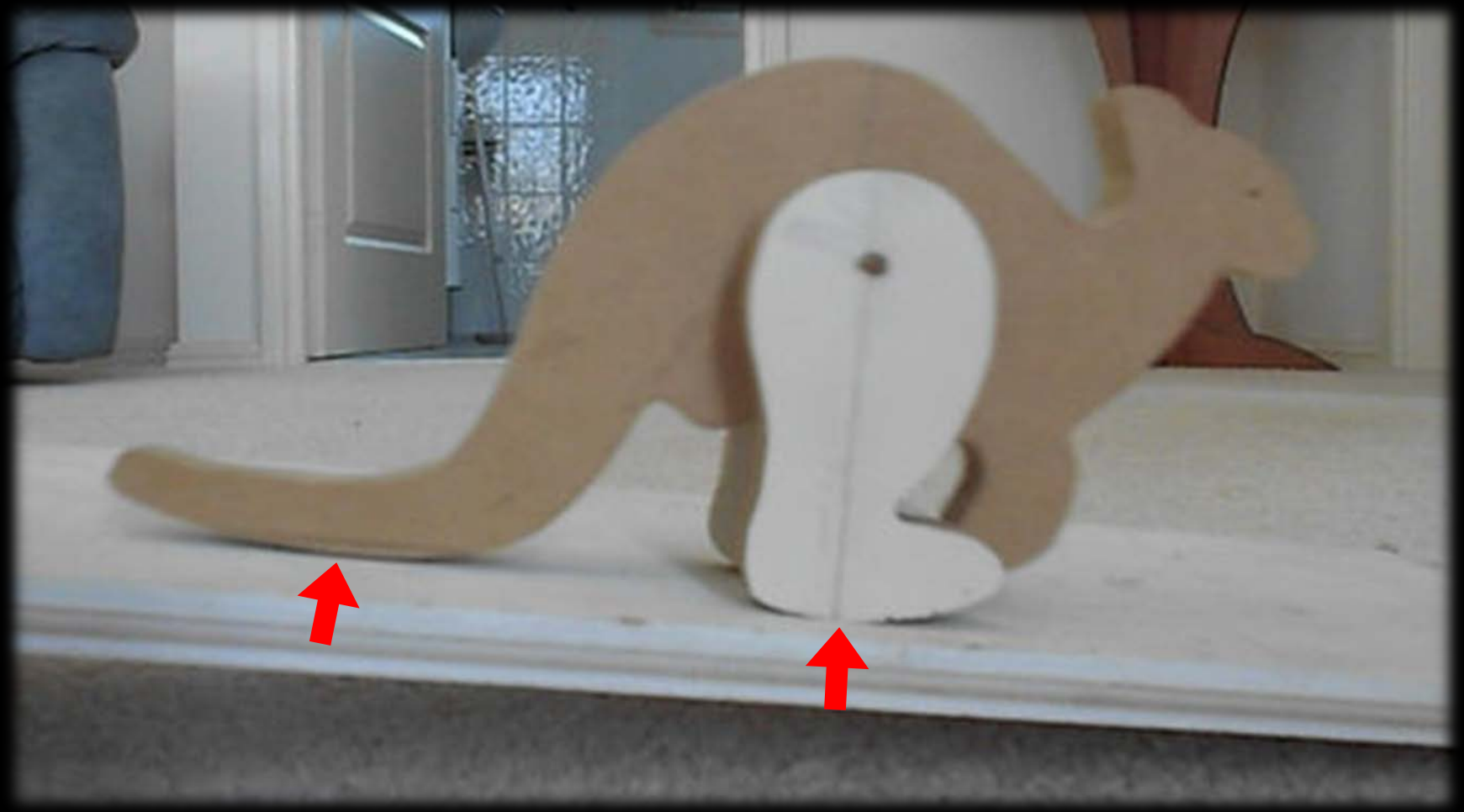
請仔細看...

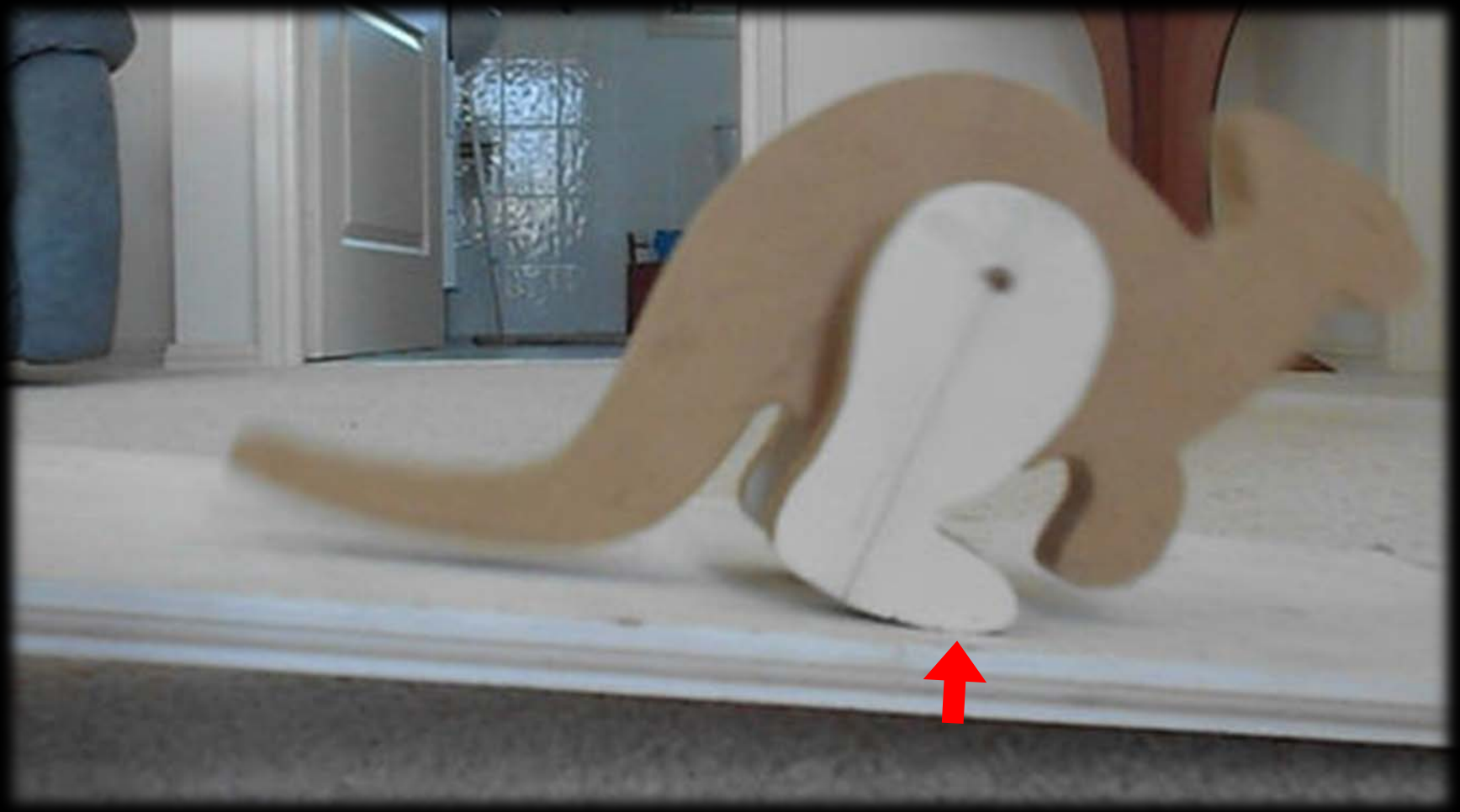


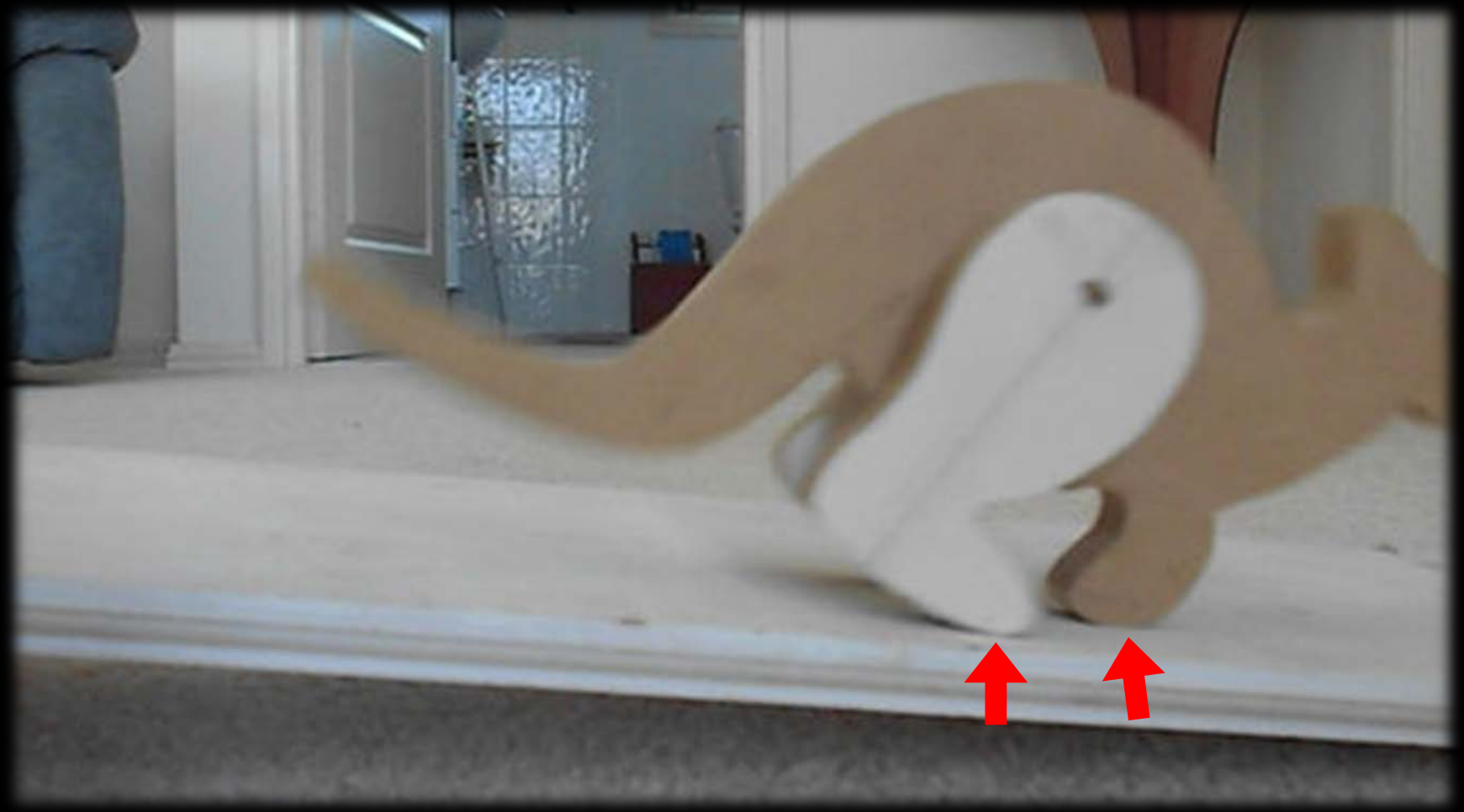




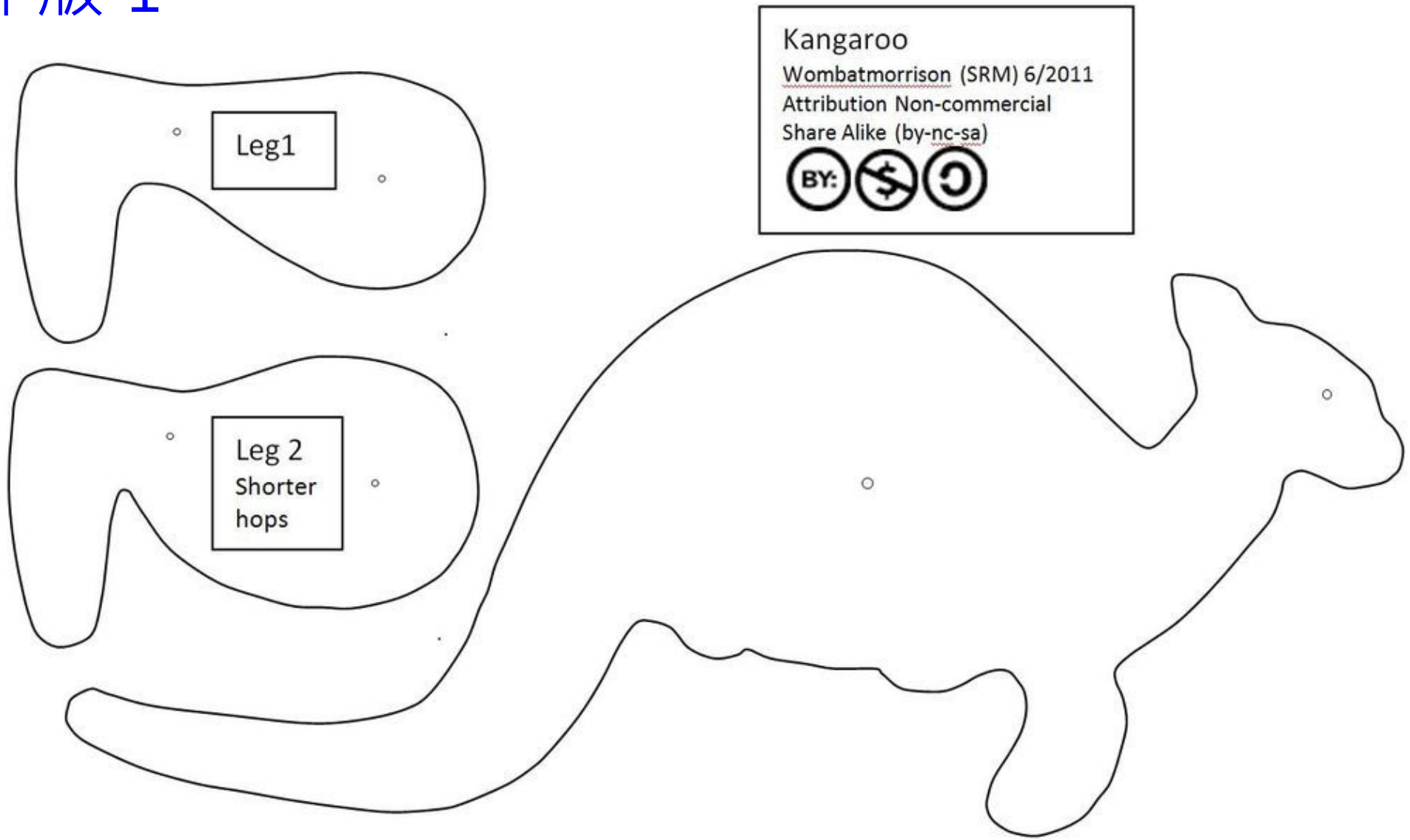




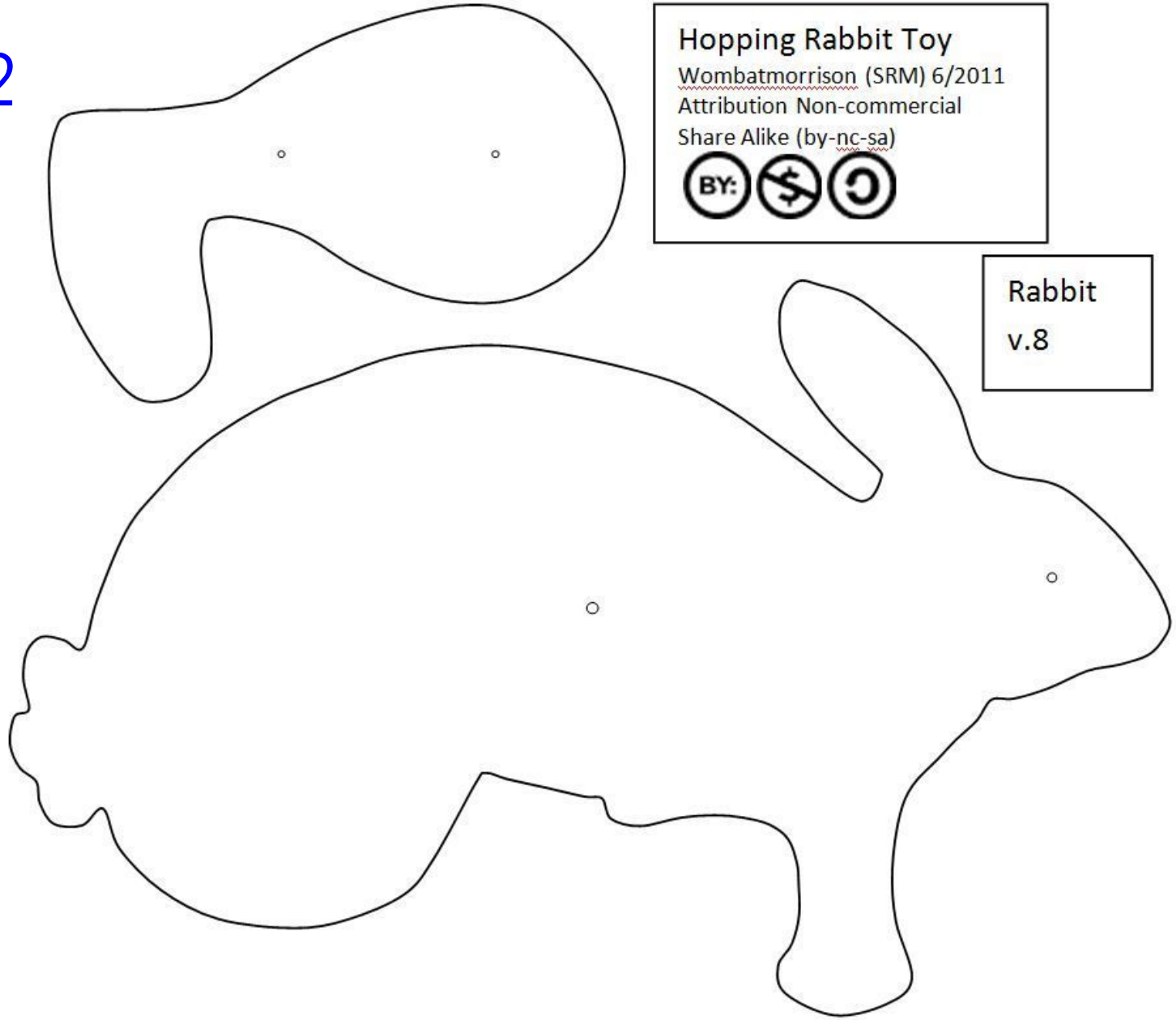




試作版 1


Kangaroo
Wombatmorrison (SRM) 6/2011
Attribution Non-commercial
Share Alike (by-nc-sa)
Leg1
Leg 2
Shorter
hops

試作版 2



Hopping Rabbit Toy

Wombatmorrison (SRM) 6/2011

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Rabbit

v.8

設計參考例

挑戰...50元「極大化」

板料限制...南檜抽屜板 195 x 170 x 12

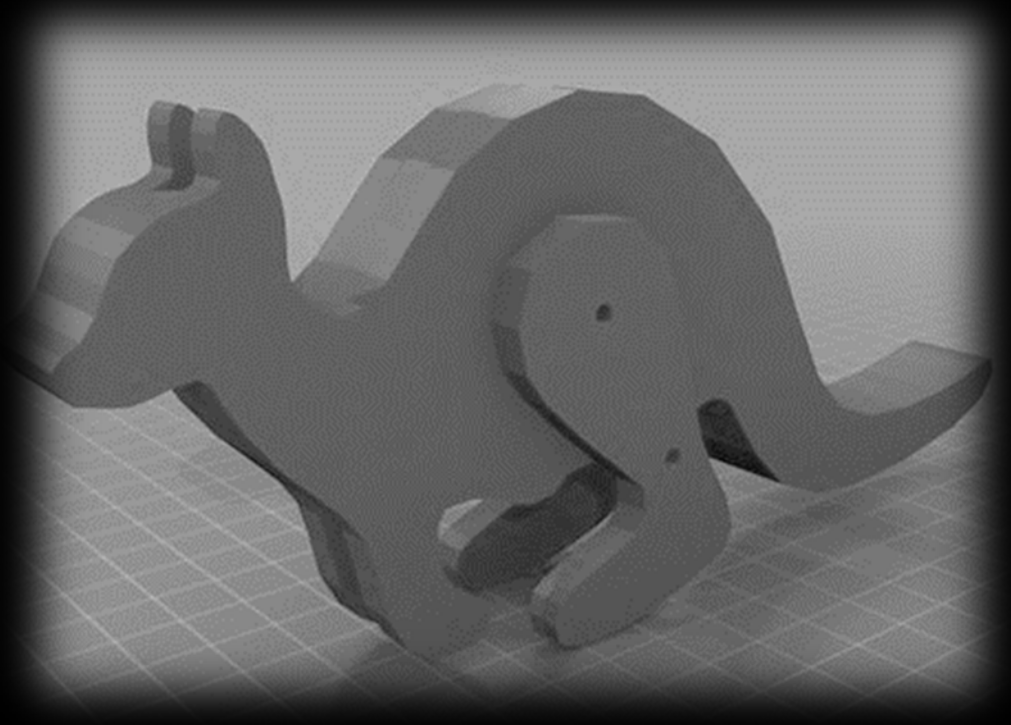
ϕ6　木棍 100

ϕ3.5竹籤 100

1、試作版 x 1+1

2、創作版 x 1

...符合...
社會善良風俗



如何得分？

1. 移動順暢。
2. 本體觸感。
3. 坡道穩固。
4. 功能優先，創意加分。