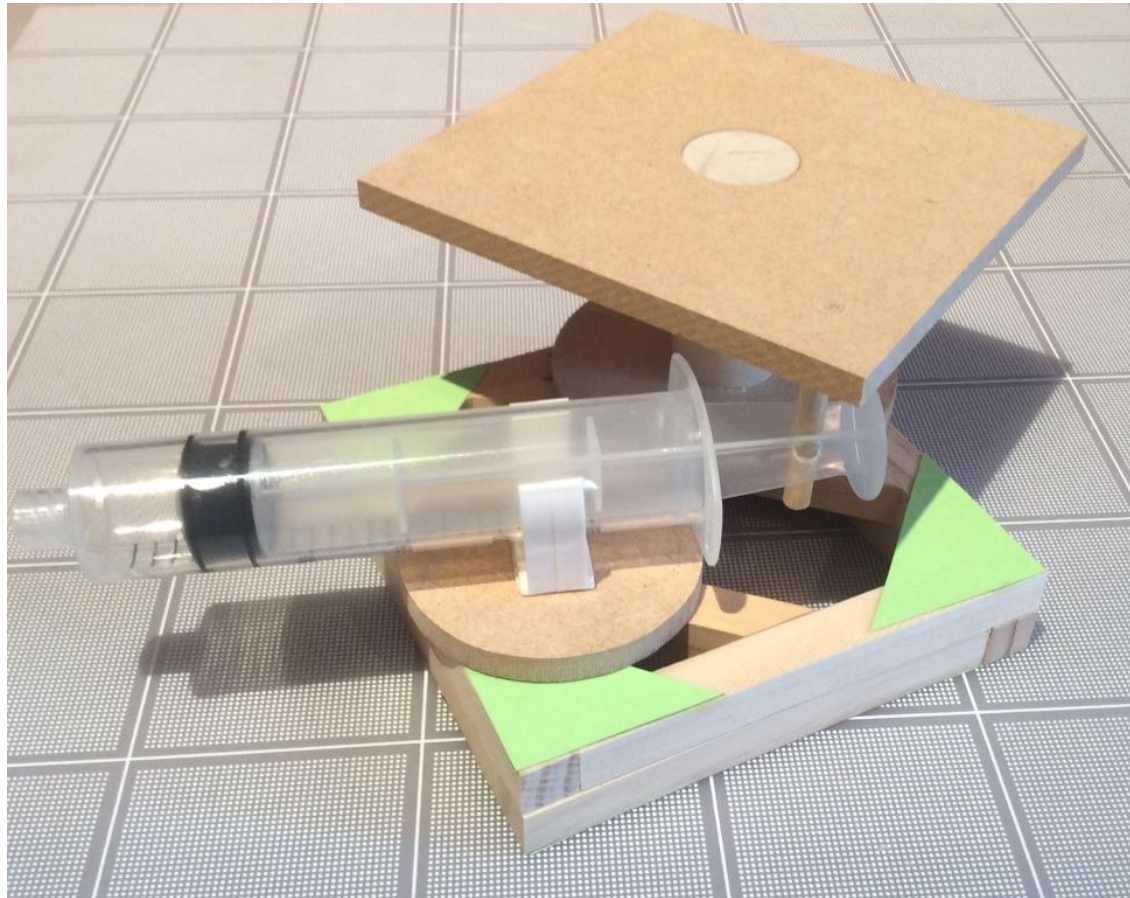


Rotating Platform

Step-by-step assembly instructions



Contents of Rotating Platform Kit

Wooden pieces ($\frac{3}{8}$ " - 10mm cross-section): 8 X $3\frac{5}{8}$ " - 92mm

2 pieces with 45° ends, 1 x $3\frac{1}{2}$ " - 89mm, 1 x $2\frac{3}{4}$ " - 70mm

Green corner gussets: 1 card

Syringes, 20cc: 2 (1 has a hole in the plunger $\frac{1}{2}$ " - 13mm from end)

Plastic Tubing: 1 length 12" - 305mm

Syringe Holder: 1

Wooden dowel, $\frac{3}{16}$ " diam.: 1 X $1\frac{3}{4}$ " - 45mm; 1 X $\frac{7}{8}$ " - 22mm

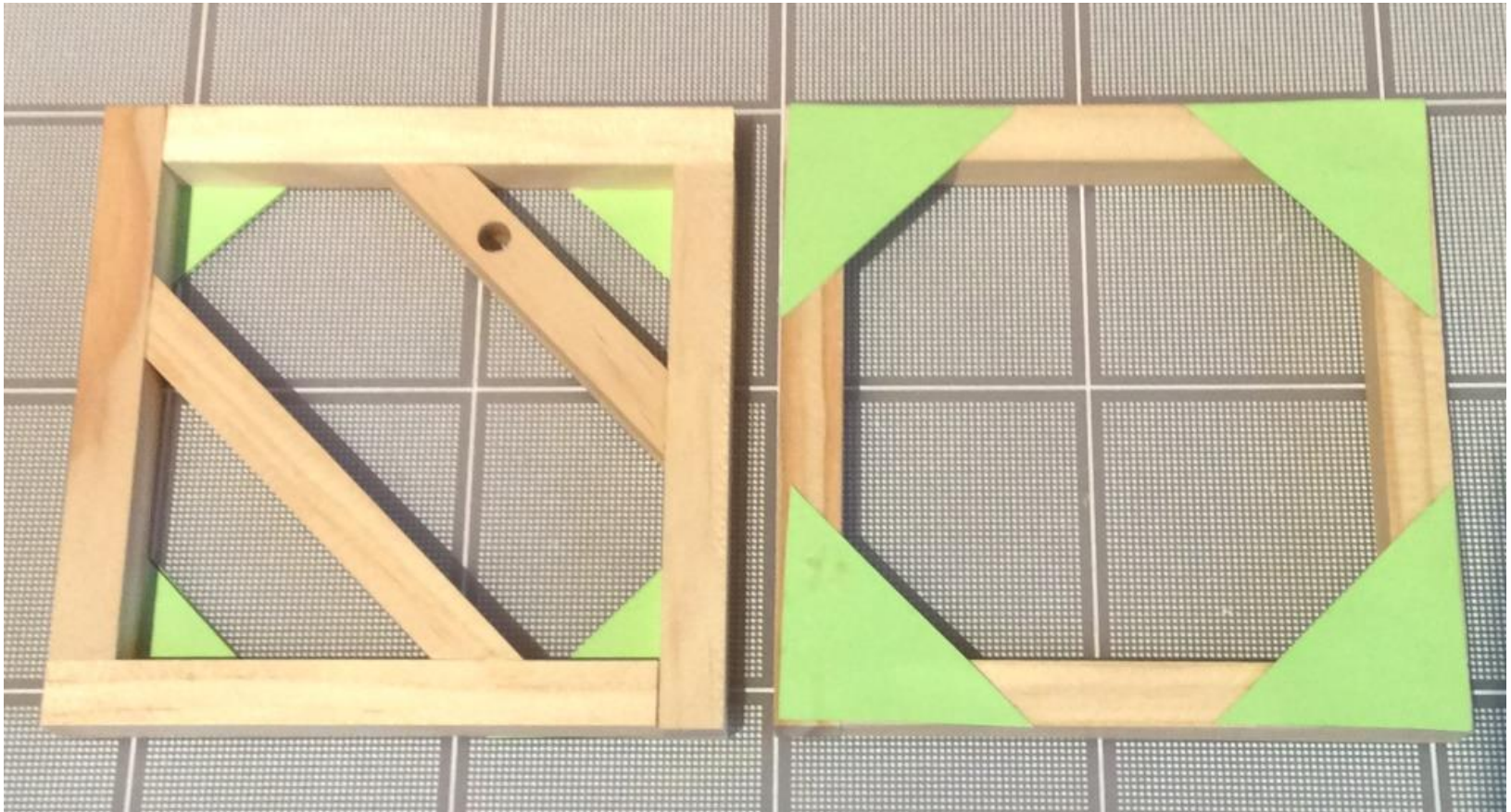
Wooden dowel, $\frac{7}{8}$ " diam. - 22mm; 1 X $2\frac{7}{8}$ " - 73mm

Large wheel, with $\frac{7}{8}$ " hole - 22mm X 1, Medium wheel $\frac{3}{16}$ " hole - 5mm X 1

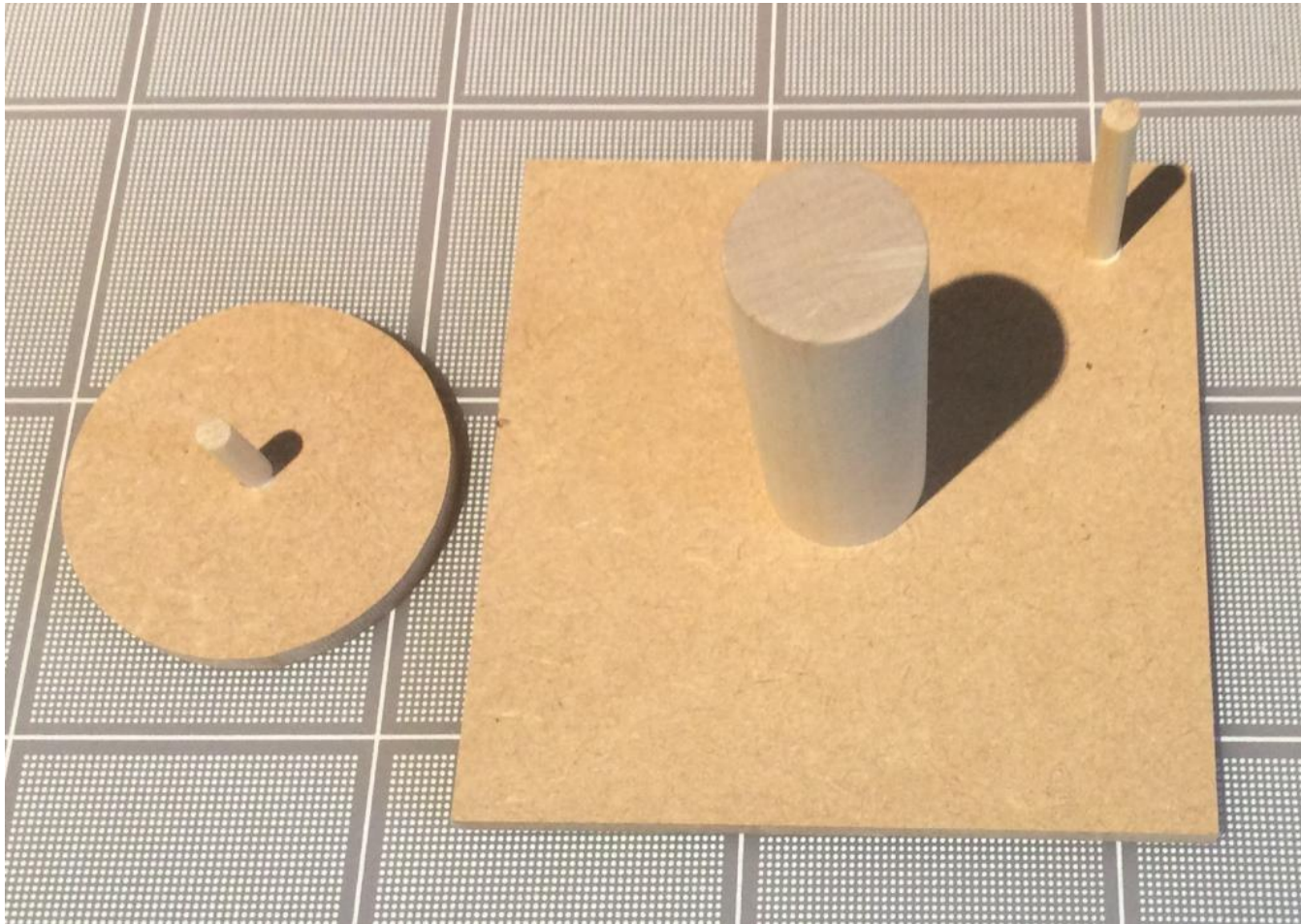
4" Square Platform with $\frac{7}{8}$ " - 22mm & $\frac{3}{16}$ " holes - 5mm

Plus, a small piece of sandpaper

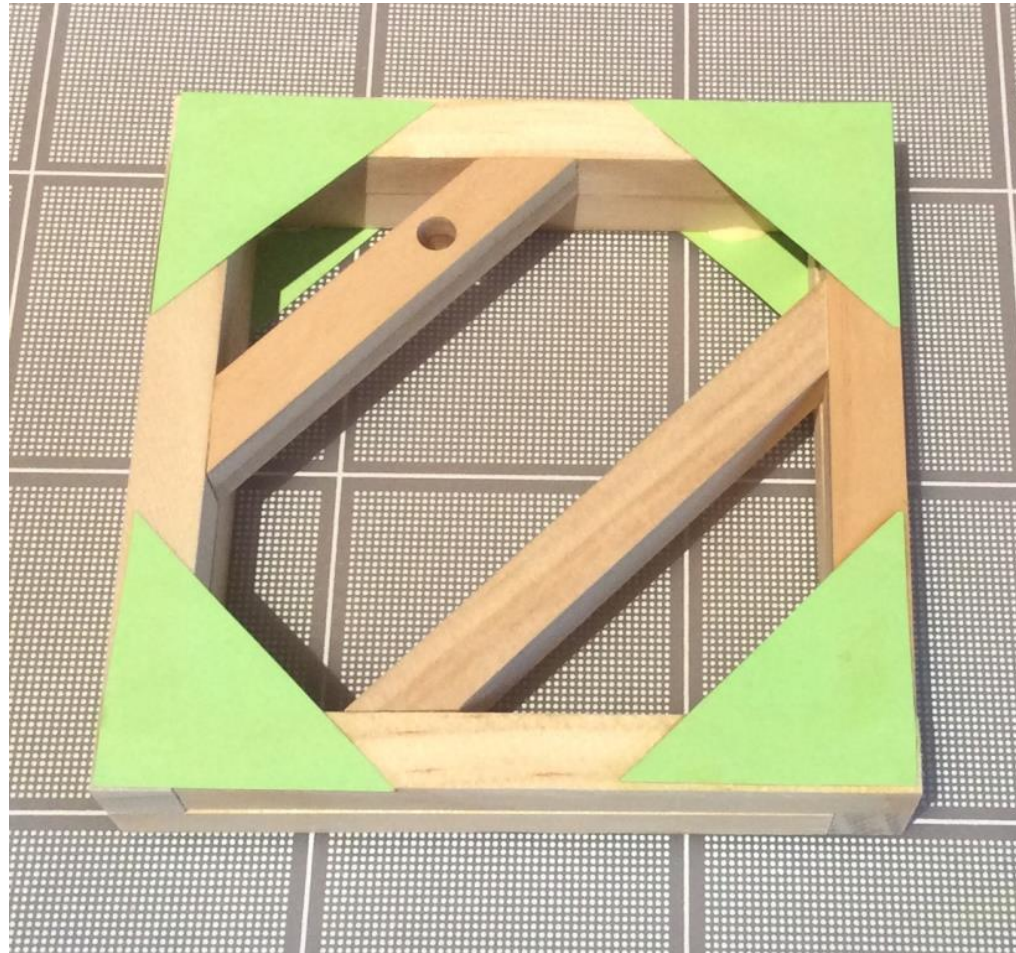
Make two 4" - 100mm squares using the eight 3 5/8" - 92mm pieces. To join the pieces of wood together, use green triangles on one side only and a small amount of wood glue on each triangle. Also, glue the two wood pieces with 45° ends into one of the frames as shown below



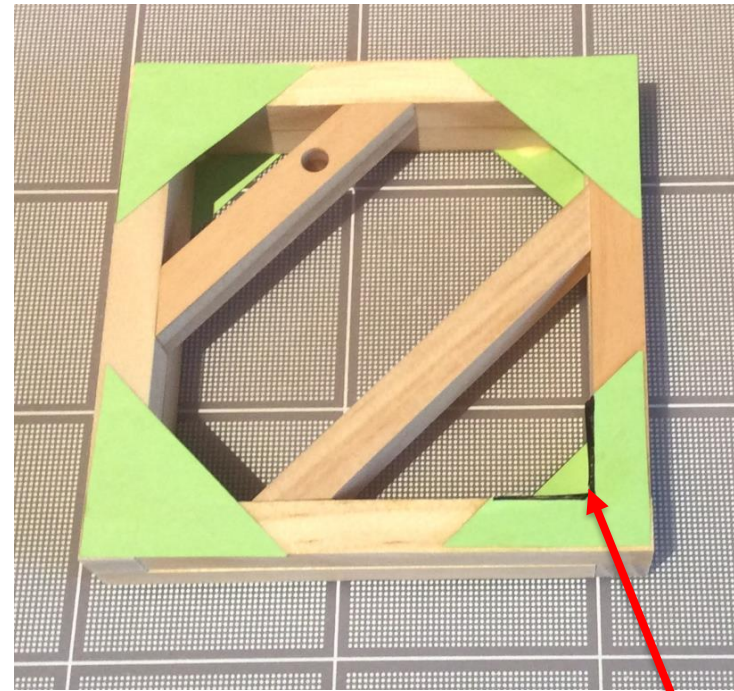
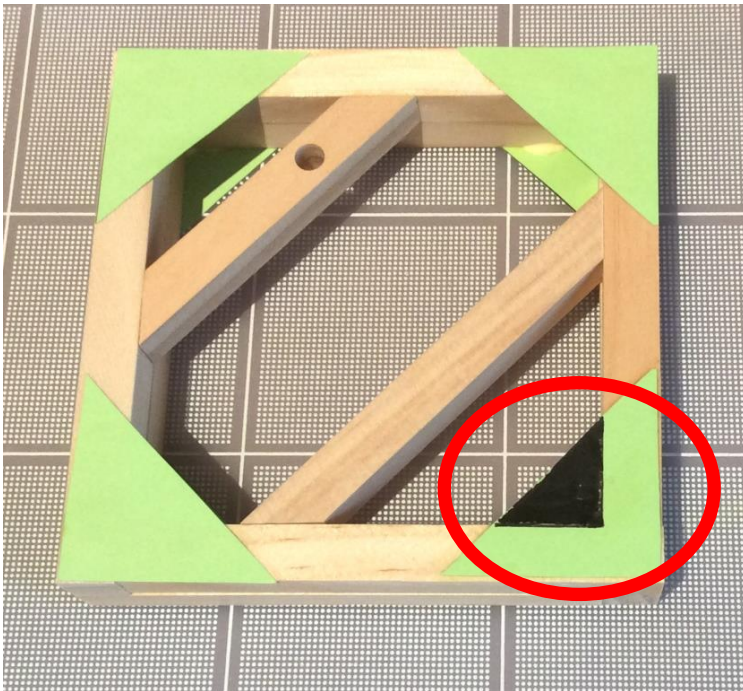
Glue the larger dowel into the center hole of the platform and the longer 1 3/4" - 45mm smaller dowel into the corner hole of the platform. Glue the other small dowel into the wheel so it is flush with the rougher side



When the frames are dry glue them together “sandwich-style.” Apply glue to the sides without the green corners. The frame with the extra pieces inside goes on top

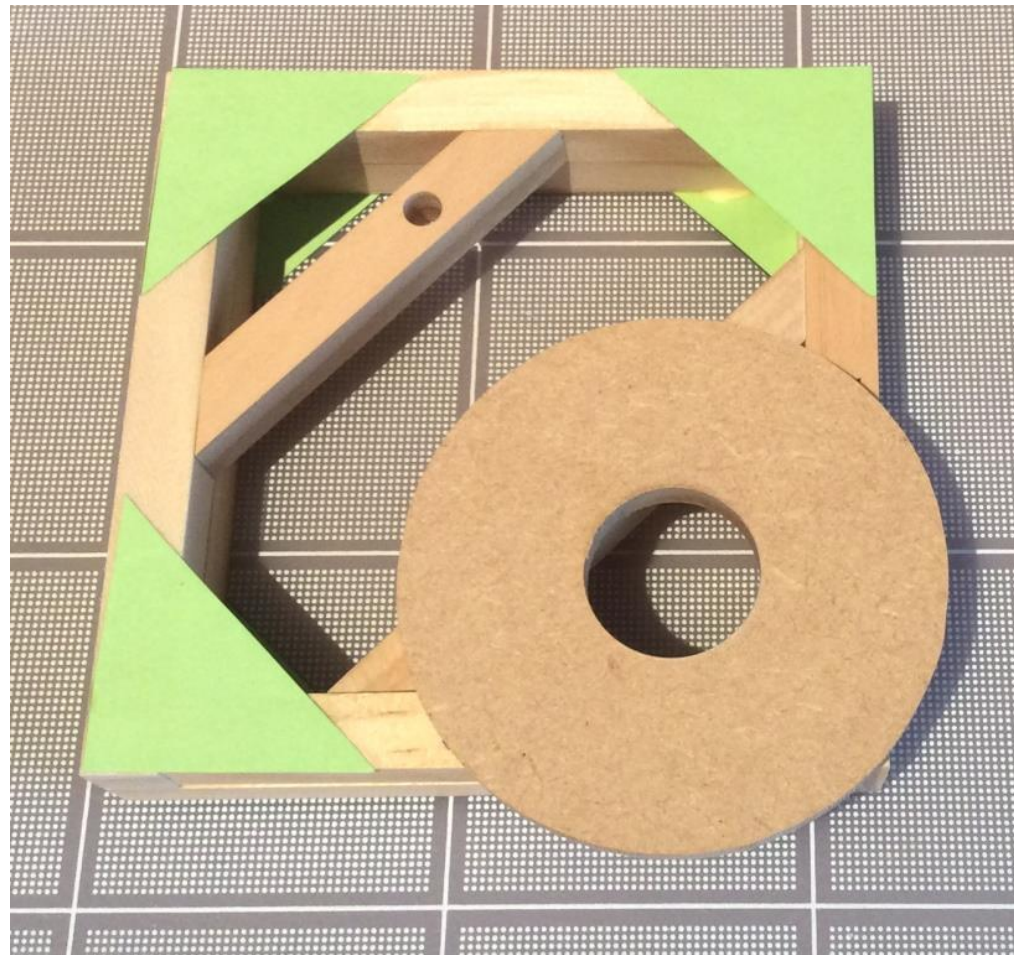


Cut out part of the green card (see black section of 1st image below) on the top frame in the 90 °corner of the largest triangle. See end-result shown in 2nd image below

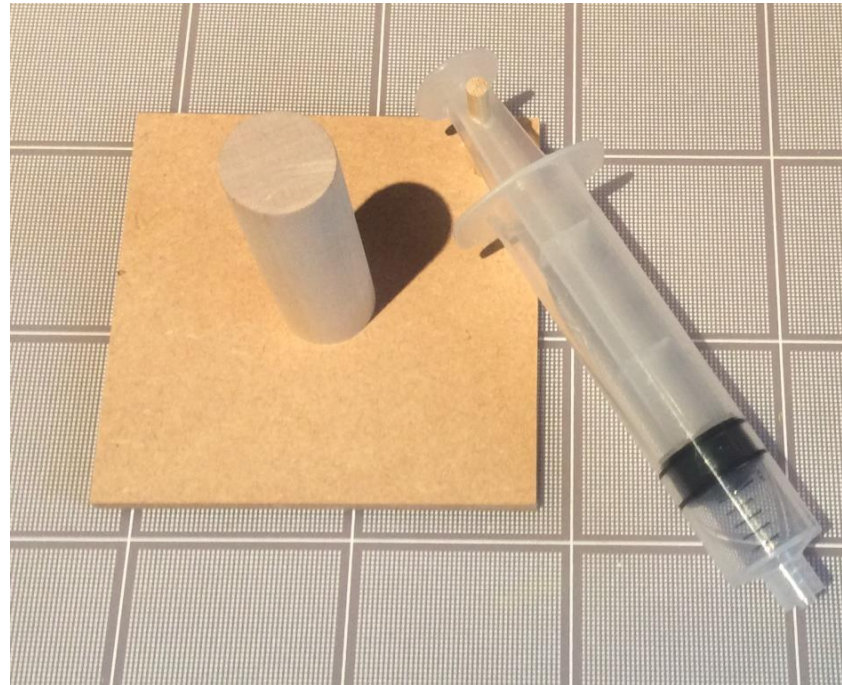


End-result

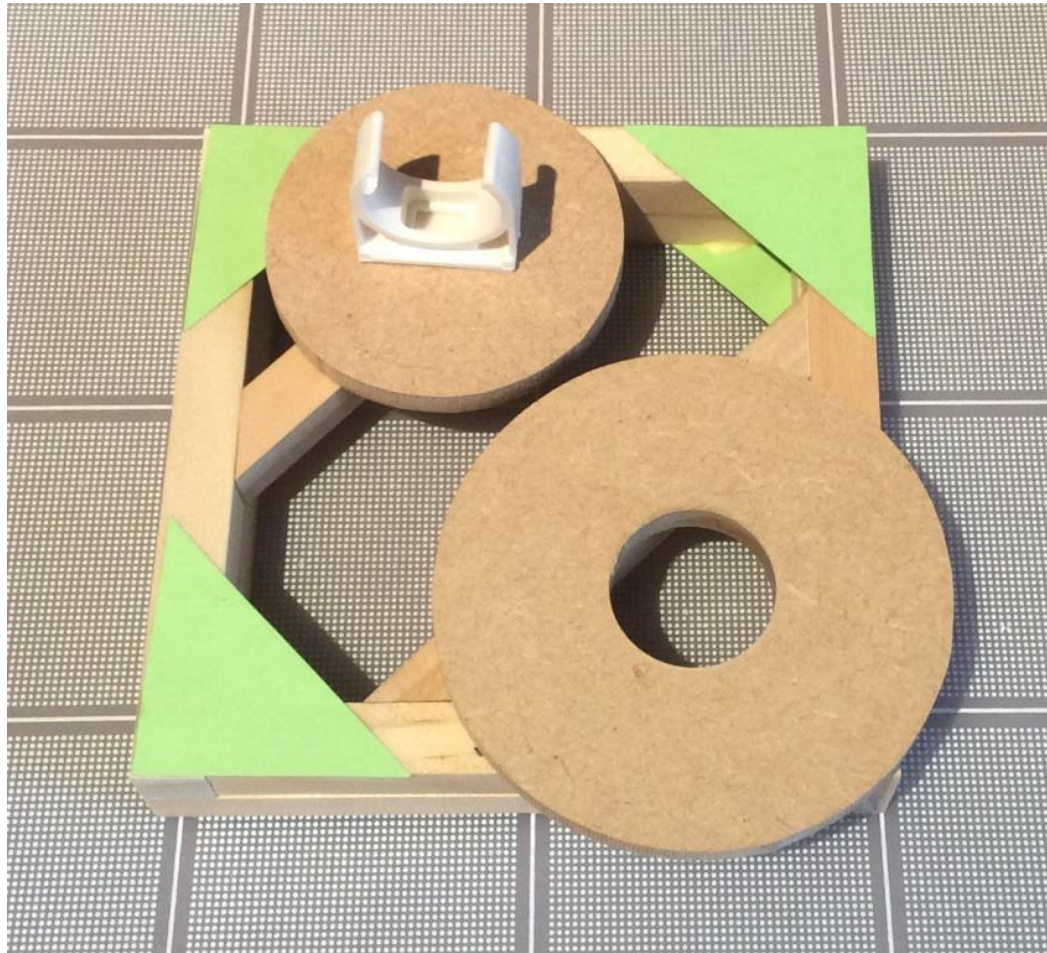
Glue the large wheel onto the frame as shown. Make sure the $\frac{7}{8}$ " - 22mm diameter dowel that is attached to the platform rotates freely in the hole of the large wheel.



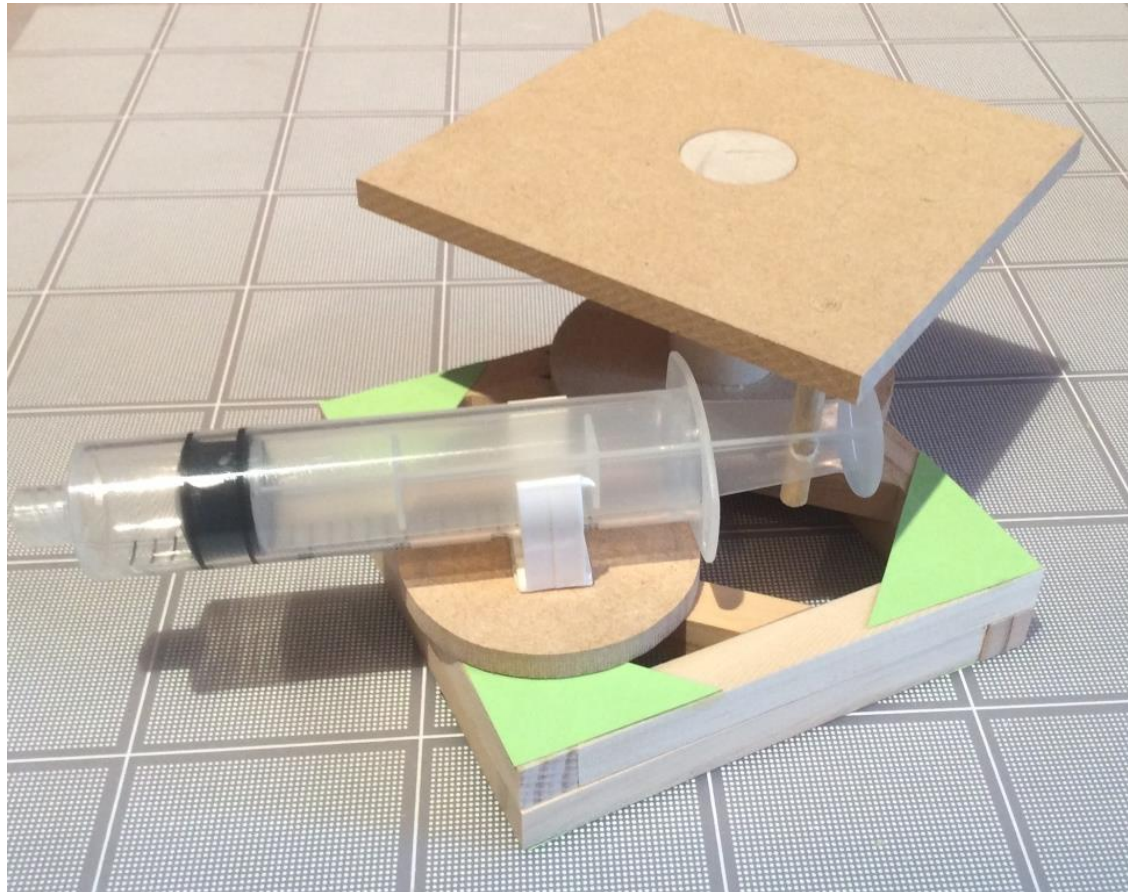
Attach the plunger of the syringe with hole in it to the platform as shown



Strip off the backing from the white clip and firmly press it onto the center of the wheel (as shown) and insert this piston-syringe platform into the available hole (see next slide)

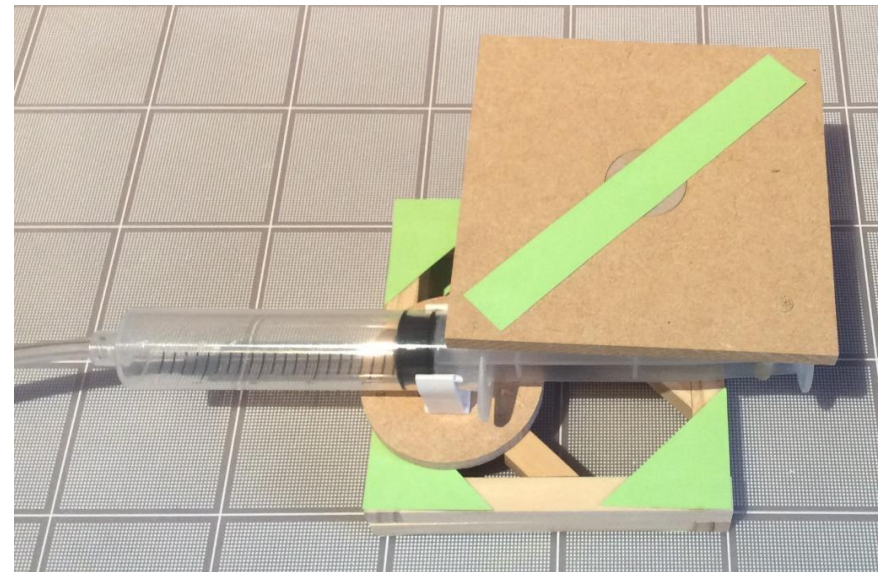
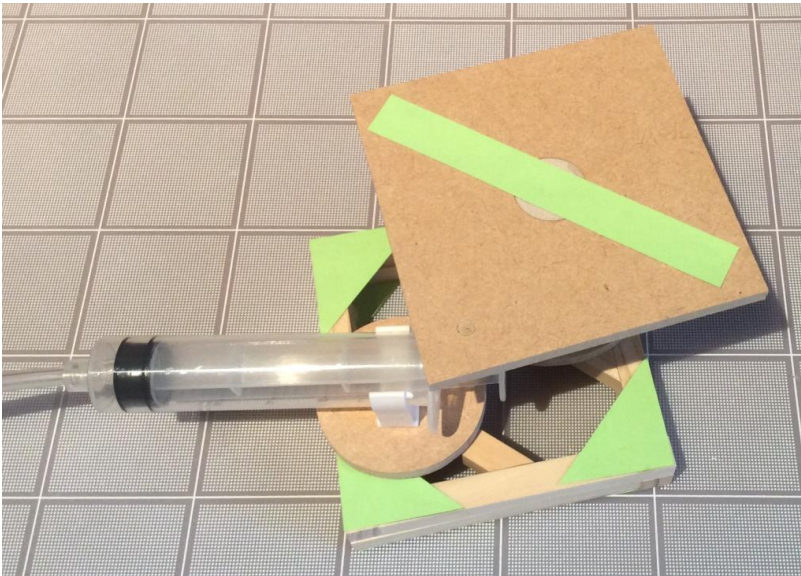


Assemble the model as shown and then push the tubing onto the syringe tip.
To operate the platform, attach the other syringe with its plunger out onto the
tubing; then push its plunger in.



Glue a piece of green card stock onto the top of the platform to measure rotation.
The platform will rotate approximately 60° when the system operates.

Note that the wheel with the syringe holder rotates as well as the platform. If the small wheel does not rotate, the syringe holder will tear-off!



This model demonstrates joining techniques and the function of the small wheel platform (piston-syringe platform).

This model is unstable and should not be used as a base for your team's solution to the Challenge.