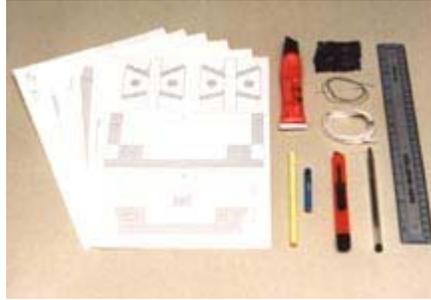


Things you will need

7 sheets of card
approx.
0.3 mm or 0.01 inches
thick and
1 sheet of paper to
print out to download.
2 x 6 - 7 mm dowel or
pencils
1 paper clip
string
6 cms (2.5 inch) square
of cloth.

These instructions which you can
save to your hard disk or print
out.



Cutting board
Flat surface
Straight edge, ruler
Scissors, craft knife
Pliers
Needle and thread.
Clear glue

Making the Base

Cut out and fold parts 1, 2, 3, 4

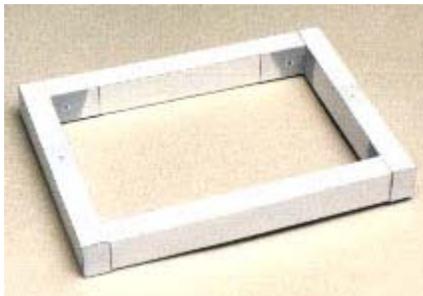
Glue cross hatched areas to parts numbered. Glue into 4, 4 sided long boxes.



Glue 1 and 2 together at right angles.



Complete 4 sided frame.



Making the Uprights

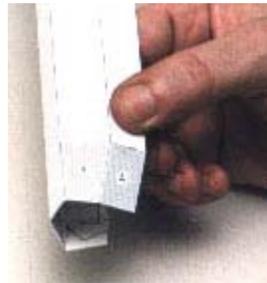
Cut out, score parts 5, 6, 7, and 8.

Roll paper lengths (parts 9, 10) 4-5 times around a cylindrical pencil so that it is a tight but not stuck, glue.

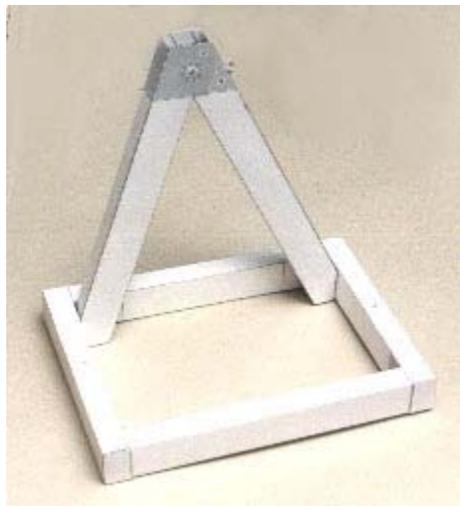
Put paper tubes against pivot holes and score around them and cut radial lines up to score mark.



Fold and glue parts 5, 6, 7, and 8. On each upright two small tabs must be glued



Glue to base



Fit paper tube part 9 with pencil into holes on upright parts 5, 6. Fit flaps inside. Repeat on other upright.



Cut pivot holes as on uprights. Cut out and fold 11, 12 and fit on top of uprights ,flaps folded out.



Position first then take apart, glue and fit. Flaps and paper tube should stick out on the outside 5 mm (1/4 inch).

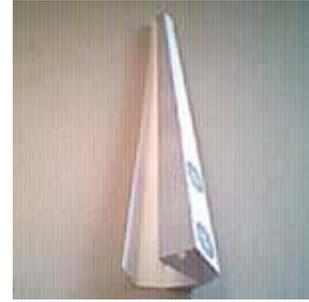


Cut out, fold and glue 13, glue to base

Making the Swinging Arm

Fold

Fold (part 14) first 3 folds inwards and glue, rest of folds go opposite way



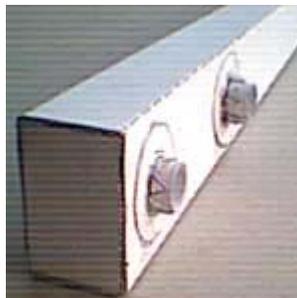
and glue.



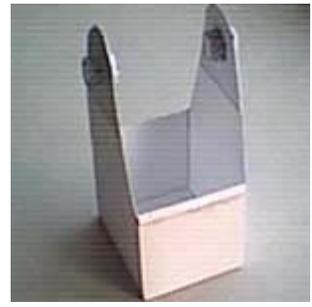
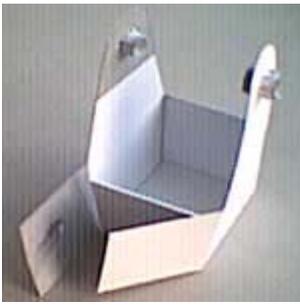
Wrap a pencil with 3 layers of tape and wrap part 15 around pencil, glue and press into swinging arm. Glue parts 16 and 17 in place.



Do same with parts 18, 19 and 20. Fit and glue part 21.



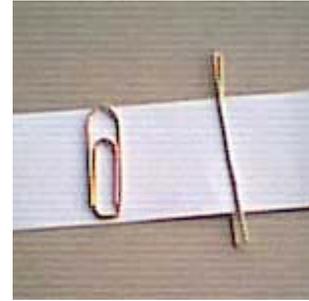
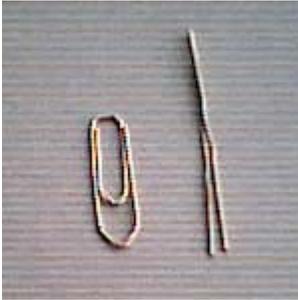
Cut out and fold cradle part 22, roll parts 23 and 24 around pencil, fit in holes with tabs sticking out and glue. Glue parts 25 and 26 in place with tabs sticking out.



Making the Hook and Sling

Part 27

Straighten a paper clip and bend double. Cut strip of paper 15 mm (5/8 inch) less in width than the paper clip.



Roll paper around paper clip to a width shown that gives it a push fit into end of swinging arm. Allow 10 mm at looped end and 5 mm at other end, bend and pinch the 2 ends onto paper.

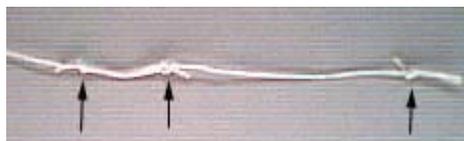


Final position.



Part 28

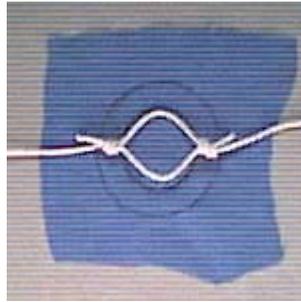
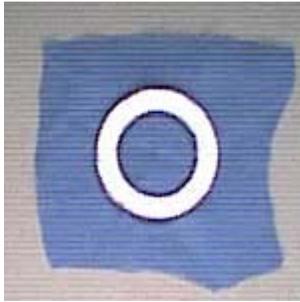
Knot the strings like this. Distance shown on paper.



and this, with paper clip shown by arrow. The knot shown by arrow should be further from the end of the loop by the length of the paper on the paperclip.



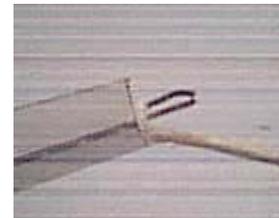
Cut out paper ring and draw edges on piece of thin cloth. Sew string onto cloth, starting with the knots and then half way along loop. The loop of the string should be a little smaller than the inner circle on the cloth



which, when hem is sewn down will form a pouch.



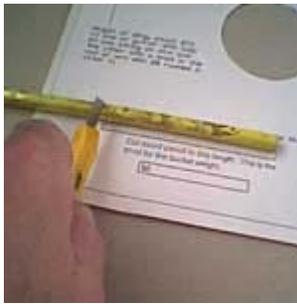
When paperclip part 27 is pressed in after knot on slingshot part 28



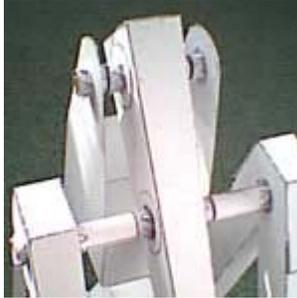
The loop is placed over paperclip, the pouch should be level and hang evenly, adjust if necessary.



Cut pencil to length shown



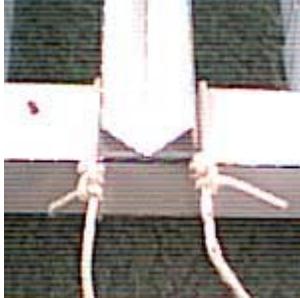
Fit pencils and assemble. Both cradle and swinging arm should swing freely.



Setup

Fill cradle with weight, coins work well.

The trigger is made up of one short and one long length of string tied on to the frame of the trebuchet as shown in picture. Tie a single bow knot. The longer string with the bow in it, and pull from side that it is tied to. Load with projectile.



The grape, use something soft, fired from a trebuchet can travel 10 m (30 feet) or more and not always in the direction you thought it would. Always stand to the side.

Complete trebuchet.



Pull string slowly, make sure the trebuchet is not pulled out of position. The trajectory of the grape can be altered by bending the paper clip up will give lower trajectory. Finally glue paper clip into swinging arm.