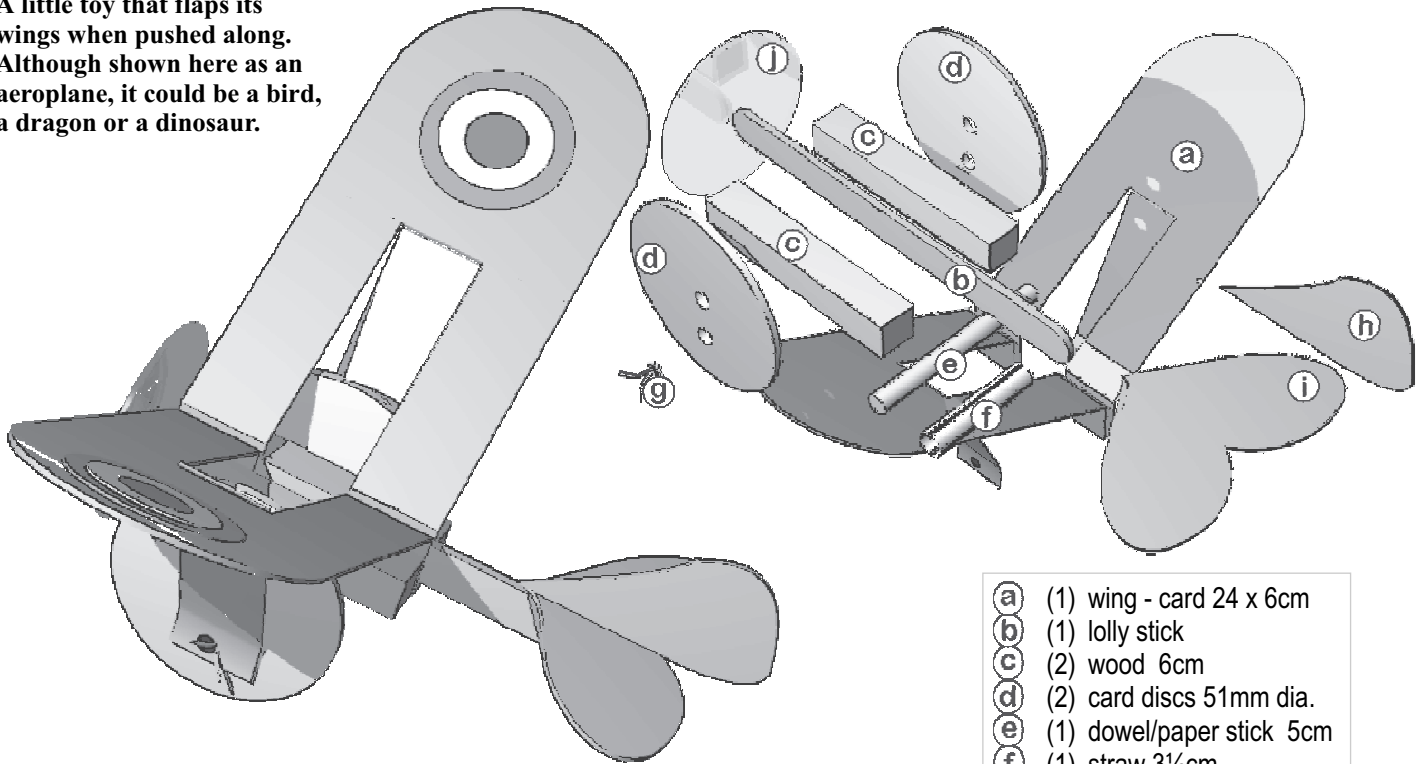
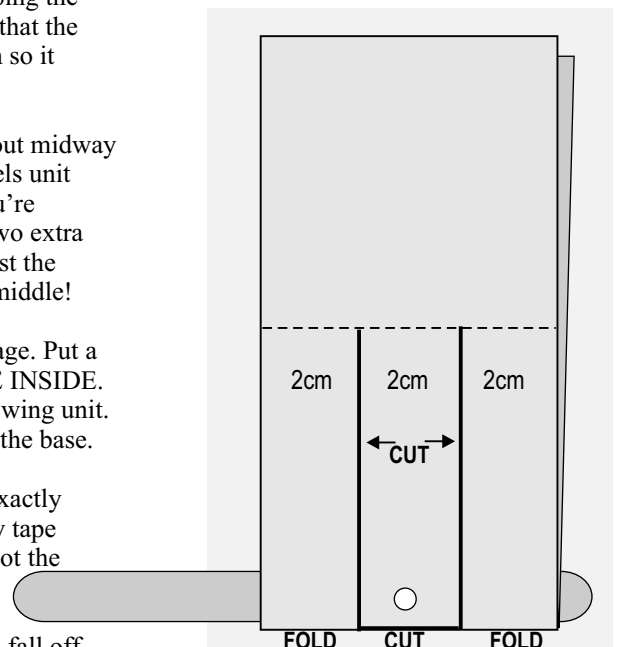


A little toy that flaps its wings when pushed along. Although shown here as an aeroplane, it could be a bird, a dragon or a dinosaur.



- |          |                               |
|----------|-------------------------------|
| <b>a</b> | (1) wing - card 24 x 6cm      |
| <b>b</b> | (1) lolly stick               |
| <b>c</b> | (2) wood 6cm                  |
| <b>d</b> | (2) card discs 51mm dia.      |
| <b>e</b> | (1) dowel/paper stick 5cm     |
| <b>f</b> | (1) straw 3½cm                |
| <b>g</b> | (2) paper fasteners           |
| <b>h</b> | (1) card tail fin             |
| <b>i</b> | (1) card tailplane            |
| <b>j</b> | (1) clear acetate 'propeller' |

- Begin by making the wings as shown. Use a springy card, but not too thick.
- Glue a lolly stick inside the fold with just a little sticking out at the front. DO NOT glue the centre sections (the parts with the holes) to the lolly stick.
- Once the glue is dry, stick the two 6cm pieces of wood, one each side. Again, make sure you do not trap the sections with the punched holes. Keeping the wings pointed upwards, press the assembly flat against the table so that the bottom is level. You are going to be fitting an axle across the bottom so it really needs to be flat.
- Punch an extra hole in each of the two discs. The hole should be about midway between the edge of the disc and the centre hole. Assemble the wheels unit (that's the axle the straw and the wheels). See the wheels page if you're uncertain. TWO IMPORTANT POINTS TO REMEMBER 1. The two extra holes need to line up and 2. the dowel axle MUST NOT stick out past the surface of the disc. The surface should be smooth - no bump in the middle!
- Once you are sure the glue has set, fasten each wheel to a wing linkage. Put a brass paper fastener through the extra hole in the wheel FROM THE INSIDE. Then put the paper fastener's legs through the hole that's part of the wing unit. When you've done this both sides of the axle will be hanging under the base.
- Glue the straw to the underside of your model. The axle should be exactly under the linkage holes. Keep the axle in place with a piece of sticky tape while the glue is drying. Remember it's the straw you're sticking - not the axle.
- Wait ages and ages before you try to wheel it along - or the axle will fall off. While you're waiting you will be able to cut out all the fancy bits that are going to turn your flapper into something wonderful!



#### MAKING THE WINGS

Fold the card rectangle, (*press the crease firmly*), then make two cuts from the folded edge. They are two centimetres apart and reach halfway along the rectangle, as shown. Punch the card 5mm, *through both thicknesses*, then cut along the centre part of the fold to form the two linkages.

What if you try it and it doesn't work?

Well the commonest reasons for the flapper not working are:-

1. You're trying it on a smooth table and there isn't enough friction to turn the wheels. Try it on the carpet.
2. You have put the linkages on the INSIDE of the wheels? They should be on the OUTSIDE
3. The paper fasteners are too tight. Try loosening them a little.