

Chocks away!

In this simple beginners' project, **Thomas de Bos** shows you how to make a fun project that would be ideal for a child, or grown up, with a love of flying



TOOLS & MATERIAL REQUIRED

NOTE: I'm not giving any specific measurements here, as everybody has their own taste in design, and most people will probably make their version a little bigger or smaller anyway.

For my aeroplane I used the following materials, but you can improvise according to what you have available.

Materials

- 1 piece of wood for the body (can be a solid piece or built up with layers of MDF)
- Some smaller, thinner pieces of wood, MDF or triplex for the wings and tail
- 2 lolly sticks for the propellers
- 1 round wooden stick for the nose
- A small piece of iron wire or paperclip for the axle of the propellers

Tools

- Saw (either a machine or hand saw)
- Range of abrasives (or machine if you have access to one)
- Drill (using a nail and pulling it out also works)
- Wire cutter
- Wood glue

This project can be made using leftover pieces of wood or MDF. Here I will show how you can build a simple toy aeroplane, complete with spinning propeller.

Designing your aeroplane

The first step is to decide on the type and size of aeroplane you want to build. Make a sketch and write down the measurements (Pic.1). I usually eyeball the measurements and then round them off so they are easy to remember. If you adjust this design in any way, then make sure you have everything you need.

Making the body

Next, take the larger piece of wood for the body and draw your design on one side (Pic.2). You're then ready to saw out the basic shape (Pic.3). On the sawn piece, mark the shape of the body and either saw or sand it off (Pic.4). Once you have your basic shape, sand all the edges to make them smooth (Pic.5) – this is especially important if the toy is to be given to a young child.

Making the wings & tail

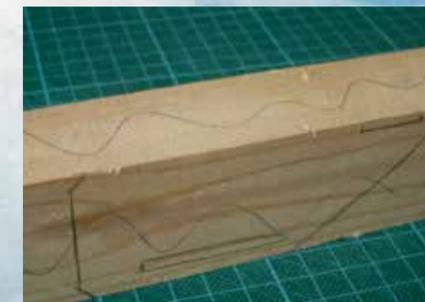
For the wings and tail you need some small pieces of wood, triplex or MDF. Draw your wing and tail measurements on the wood and saw these off (Pic.7). Next, take some masking tape and build your model without glue to see if it is what you had in mind, then make adjustments where needed (Pic.8). Glue the wing and tail pieces together (Pic.9), but DO NOT glue the wings or tail onto the body just yet! Sand the wings and tail to get rid of any sharp edges and hide the seams where the parts have been glued together (Pic.10).

Making the propellers & assembly

To make the propeller, you will need to use two lolly sticks. If the ones you have are too big for



STEP 1. These are the drawings I made for my design – note the nose cone design and the sketch of the wings drawn at an angle – all important points!



STEP 2. The larger piece of wood, all marked up for the body



STEP 3. Once sawn, you should be left with the basic body shape



STEP 4. Next, mark off the parts of the wood that need to be sanded off



STEP 5. Take your block to the disc sander or sand by hand until all the sawn edges are smooth



STEP 6. Your sanded block should look something like this

your aeroplane, just saw off a piece and sand the edge until it is rounded.

I decided to cut a section out of the point where the two sticks overlap in the middle, which helps them to sit flat; this isn't necessary but it makes for a cleaner appearance. Glue the two sticks onto each other in the middle.

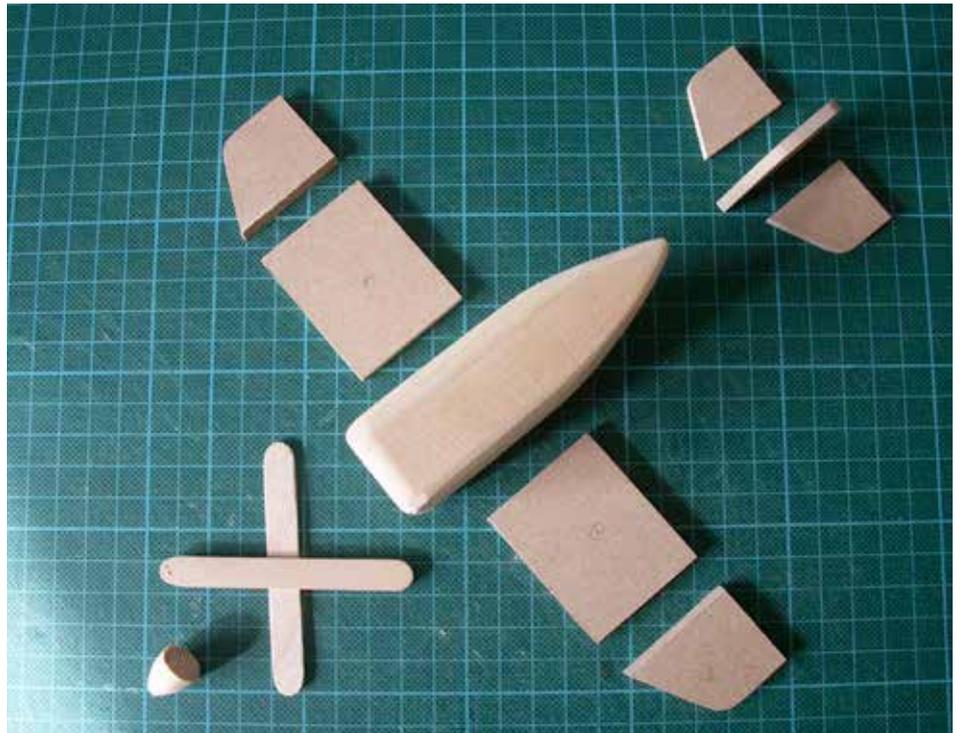
To make the nose cone, use a piece of dowel or a piece of round wood with a similar circumference. Sand this until you achieve the desired cone shape, then, saw this off the piece of wood you're using.

Next, drill a hole into the body and the nose cone, which needs to be the same size as your axle. Drill a slightly larger hole in the middle of the propeller, so that it spins smoothly around the axle.

Cut your axle to size, so that it fits into the body and the nose cone, and leave enough space so that the propeller can spin freely.

Glue the axle into the body of your aeroplane, then wait for the glue to dry. You're then ready to attach the propeller and glue onto the nose cone (**Pic.11**).

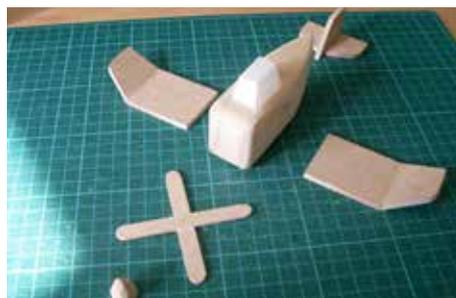
If you wish, you can paint the aeroplane (ensure paints are child-safe if this is to be a gift for a child), or add a pilot and landing gear, then it's definitely time to try out your new toy! **GW**



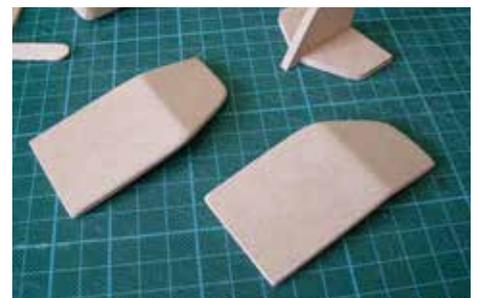
STEP 7. Here you can see all the components laid out. Note the sections at the ends of the wings, which have to be cut and sanded at an angle. To give you an idea of proportions, the squares on this cutting mat measure 1cm each



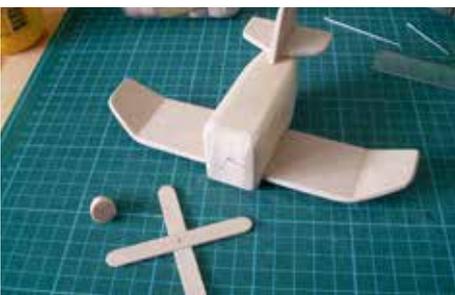
STEP 8. A trial run to check that everything fits – no glue at this stage, just tape!



STEP 9. Only glue the wing and tail pieces together at this stage



STEP 10. The sanded wings help to hide any evidence of gluing



STEP 11. The body once constructed, with propeller, nose cone and axle – all ready to be attached



STEP 12. Once all the component parts are added, the project is complete



STEP 13. The propeller in action!