People in glasshouses

You hear it everywhere: compost your organic waste, buy local veggies directly from the producer, or better even, grow them yourself. “Yum”, you might think, but how to go about this if you don’t have a big garden, live in a confined space, or it’s winter and it’s regularly hosing down?

We’d like to present a simple and uncomplicated way to raise your own veggies from seeds: the tiny cold frame greenhouse. Our greenhouse is essentially going to be a bottomless box with a window as the lid. In this example, the greenhouse consists of a small window, two battens, and a few boards cut on an angle for a preferable exposition towards the sun. Because the materials used are recycled, your greenhouse will have slightly different dimensions, but the following instructions should apply to most scenarios.

1 SOURCE THE MATERIALS

Find a suitable window and check it for wear and tear. Does it have hinges? Can you reuse them easily? Are they attached to the frame in a solid way? Do they work or do they need replacing? What about the paint - is it chipping really badly? Keep in mind that old exterior paint is often lead-based - it’s best not to expose yourself to it while you’re working, but we will be sealing the greenhouse in the end to prevent lead from leaching into the soil.

We found a lovely small window (795mm x 440mm) with a 30mm thick 95mm x 795mm plank attached to it via hinges FIG 1. The screws were completely corroded onto the hinges, so the decision to keep the hinges and the adjoining plank was made for us. If your window isn’t attached to anything, get a sturdy plank to screw the hinges to. You’ll also need some boards, which roughly match the dimensions of the window frame, for the base of the greenhouse. Most city council recycling stores (Trash Palace, Second Treasure, The Super Shed) or building recyclers should have plenty of these materials for reasonably cheap.

SCAVENGING YOUR MATERIALS

- Smallish window (glass, frame & hinges)
- Wooden boards
- Screws
- A tap head or similar for a handle
- String
- Varnish or paint

TOOLS YOU’RE GOING TO NEED

- Handsaw
- Screwdriver
- Drill
- Sandpaper
- Measuring tape

SKILL

COST $15

SPEED 0-3 HOURS | 4-8 HOURS | TAKES AGES

PHOTO BY KATE MACPHERSON

What's so cool about a greenhouse?

Quite a bit, especially this little one. As it's simply put together and not airtight in any way, and we're just using single glazing clear glass, this greenhouse is called a 'Cold Frame'. It can extend your growing season and kick-start growth by providing stable conditions: protection from cold, rain, wind and intense sun.

Shelter from too much precipitation is a big advantage in a greenhouse. There's no excess water gathering on plants, and the soil keeps relatively warm and dry. Best conditions are achieved by putting the greenhouse on loose soil that can soak up the run-off water. Protection from wind is important for young plants and also helps stabilise the temperature.

In general, with help of a greenhouse, plants grow better and can be planted earlier in the year. If you're planning to plant seedlings in June/July, it really helps to put the greenhouse into the planting spot about two weeks before planting, so that the soil has a chance to dry out and warm up.

Once sown, most seeds need light (some need darkness, so have a look at the packet) to germinate. Just out of direct sunlight is perfect. Once the seedlings are strong enough, the whole greenhouse can be lifted up and put on top of the next lot of seeds, and the little plants can grow happily ever after.

By putting a few old bricks inside your glasshouse you can warm things up a bit for your seedlings. The sun's heat will be soaked up by the bricks during the day, and released at night.

PHOTO BY KATE MACPHERSON

2 DIMENSIONS OF THE GREENHOUSE

The window will be placed on top of the box, overlapping it slightly, so that the box's end grain isn't unnecessarily exposed to rain. The greenhouse is 95mm high at the front and has an inclination of about 20 degrees (for better exposure to the sun) which for our example resulted in the following pieces:

2 sides: width 435mm, front height 95mm, total height 237mm

Back: 740mm x 150mm (the plank and back will sit on a 160 degree angle to each other (180 – 20 inclination)

Front: 740mm x 95mm

2 battens: about 25mm square, 95mm long

Depending on the size of your window, these measurements will vary, of course, but keep in mind that the window-plank unit can't close past a 90° angle.

3 DRAW THE SIDE'S SHAPE FIG 2

Start with a rectangle board of wood. Draw a line (f) 95mm up from the bottom of your board (e). From point (A), mark a 20° angle. Draw a line (b), following this angle, the depth of your window, minus 15mm (in our case, the depth was 440mm, so our line was 425mm). From point (B), draw line (c) at a 90° angle to (b). This is where your hinged plank is attached, so make them the same length. The length (d) results from a line running from corner (C) perpendicular onto baseline (e). This sounds all a bit verbose, but the 3 most important measurements here are:

the front height (a): 95mm
the angle of corner (A): 20°
the angle of corner (B): 90°

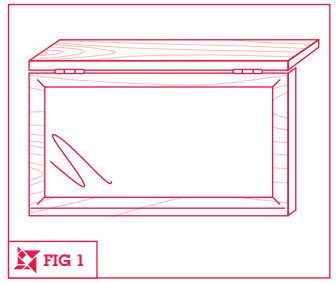

FIG 1

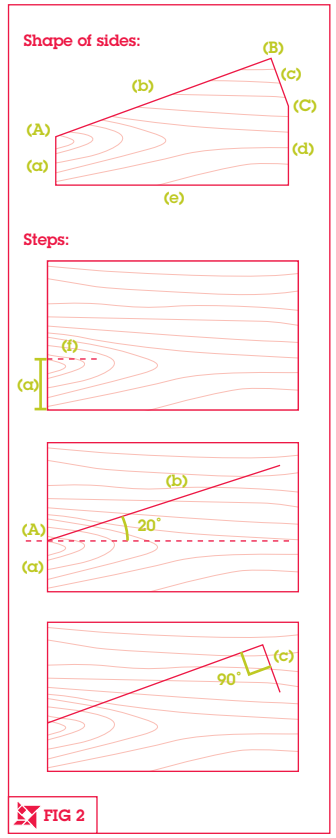

FIG 2

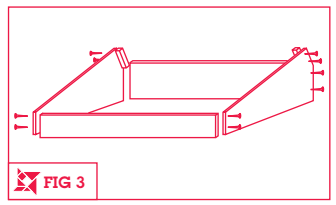

FIG 3

4 CUT THE SIDES

Cut one side first and then use that side as a pattern to cut the other one.

5 ATTACH BATTENS

Turn the window and plank upside down and fasten battens to the plank with screws, set in from the edge the equivalent of the thickness of the side pieces. The poles and plank will provide a solid unit to withstand the force generated by opening the window.

6 ATTACH SIDES

Screw the side pieces onto the battens from the outside, so they sit flush with the sides of the plank.

7 CUT AND ATTACH BACK AND FRONT

Cut the back so it fits between the sides at edge (d). Attach with screws from the outside. The top of this piece will now butt up snug against the plank. Cut and attach a piece for the front in the same way.

8 SEAL

Once the greenhouse is constructed, varnish it completely to seal it against rain and to prevent lead contamination. We used an oil based varnish from Biopaints, whose paints and varnishes are all biodegradable and use only natural ingredients.

10 PIMP MY COLD FRAME

We found an old chrome tap head to use as a handle. Use whatever fun handle you can find and screw it in position on your window frame. Attach a string to one side to support the window when it's open. Drill a hole, thread your string through and tie a knot on the inside of your greenhouse. Attach the other end to a screw on the window frame.

10 SOW THE SEEDS OF LOVE