Moray

GREENSPACE
Education Project

How to build your own Recycled Plastic Bottle Greenhouse

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Build your own Plastic Bottle Greenhouse

How to make one in eight easy steps…

1. Gather heaps of used plastic bottles. The 2 litre bottles are ideal and around 1,500 are needed for a large sized greenhouse.

2. Wash the bottles and remove the labels. This can be done in a bucket of soapy water. Remove the bottle tops and cut off the bottoms of the bottles with a sharp pair of scissors. Be careful as the scissors and the cut bottles can be sharp. Remember this has to be done up to 1,500 times so can cause blisters and be time consuming.

Done by kids with minimum supervision.

3. Fix 4 posts vertically into the ground. Treated 4" x 4" posts cemented a couple of feet into the ground works great. These are for the corners of the greenhouse. Put slabs or mulch around and inside to suppress weeds.

Best done by adults.

4. Make a frame for each side, roof, door etc. These are best done with treated 2” x 2” timber made into frames with mitred corners screwed together.

Best done by adults and older kids.

5. Stack the bottles one inside another with a garden cane supporting them through the middle. At one end reverse a bottle so it faces the opposite way from the rest and fit it inside. This will to make a long tube with the ends of the garden cane sticking out of the tops of the bottles at either end.

Place the bottles and canes onto the frames to be attached at the top and bottom of the frame.

Done by kids with minimum supervision.

6. Using fencing staples attach both ends of the cane onto the frame. The frame will keep the bottles squashed up. Staple as many rows as possible until the frame is filled.

Done by kids with minimum supervision.

7. Screw completed frames onto uprights.

8. The roof can be flat or sloping. If making a sloping roof it is best to make two triangular frames for the gables. Staple bottles onto these frames as before.

Screw the triangular gables to the posts and include a top beam and vertical supports (from the top of the gables to the top of the front and back panels). The sloping sides of the roof can be made out of similar panels as the walls. These can then be screwed onto the top beam, gable ends and top of the side panels.

The door can be made of a smaller frame hinged to a larger frame making up the front wall. Make the door smaller than the inside of the frame to allow it to open freely even if it sags.

Best done by adults and older kids.

…. then start growing your flowers, veggies etc

Greenhouse Shopping list (*for greenhouse of 6ft by 8ft and 6ft high*)

Materials:

☐ 4” x 4” posts:	4 @ 8 foot long (for corner posts sunk 2 ft into the ground)	
☐ 2” x 2” timber:	Side frames	4 @ 8 ft
		4 @ 6 ft
	Back frame	4 @ 6 ft
	Front frame	4 @ 6ft
	Front wall and door	6 @ 6 ft
	Roof sides	4 @ 8 ft
		4 @ 5 ft *
	Top beam	1 @ 8 ft
	Top gables	4 @ 5 ft *
		2 @ 6 ft
	Gable support	2 @ 4 ft *
		Total 240 ft

**To be cut to length depending on slope and therefore height of roof*.

- ☐ Garden canes 6 foot x 140 (approx)
- ☐ Hinges for door
- ☐ Screws 4” for fixing timber to posts x 40 (approx)
  3” for making frame x 100 (approx)
- ☐ Fencing staples x 300 (approx)
- ☐ Postcrete x 4 bags
- ☐ Gravel / slabs / mulch matting
- ☐ Plastic bottles x 1,500 (approx)

Tools list:

- ☐ Spirit level
- ☐ Drill
- ☐ Mitre block
- ☐ Saw x 2
- ☐ Screwdriver
- ☐ Hammer x 3
- ☐ Sharp scissors (as many as required)
- ☐ Bucket of soapy water
- ☐ Spade
- ☐ Pinch bar
- ☐ Measuring tape
- ☐ Stepladders

Photos from Inveravon Primary School and Rothiemay Primary School.