

# Construct A Quad Can Bug Hotel

**EXAMPLE**

Please watch the video and follow the instructions on this sheet carefully.

## Step 1 – Gather your raw materials.

For the frame :	Natural Items To Fill Your Bug Hotel:
Wood to create...  (x1) Base (x4) Sides (x4) Baked Beans/Soup Cans* (x12) Screws/Nails or Wood Glue  <b>*Safety Note: Use cans with a ring pull lid as they will leave a less sharp edge but still be cautious of sharp edges when filling your cans.</b>	For example...  Moss Bamboo Canes Pine Cones Straw/Hay Small Sticks Dry Leaves Dried Plant Stems

**QUESTION 1:** What other waterproof items could you use instead of the cans?

Plastic Bottles
Yogurt Pots
Glass Jar

## STEP 2 – Creating The Frame

The dimensions required for the Bug Hotel frame depend on the dimensions of your cans and the thickness of the wood you are using, so let's make a note of those first.

Diameter Of Can?	Height Of Can?	Thickness Of Wood?
75mm	110mm	12mm

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Frame Base Dimensions.

$$(2x \text{ Diameter Of Tin} + 1mm) \times (2x \text{ Diameter Of Tin} + 1mm)$$

$$\underline{151mm} \quad \times \quad \underline{151mm}$$

Sides Dimensions.

$$\text{Length} = 2x \text{ Diameter Of Tin} + \text{Thickness Of Wood} = \underline{162mm}$$

$$\text{Height} = \text{Height Of Can} + \text{Thickness Of Wood} + 5mm = \underline{127mm}$$

**QUESTION 2:** What would the smallest dimensions of the base be if you were using 10 cans instead of 4?



<b>376mm x 151mm</b>	<b>751mm x 76mm</b>
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**QUESTION 3:** There are three different ways of fixing your frame together – screws, nails or wood glue? What are the advantages and disadvantages of using each method?

Method:	Advantages:	Disadvantages:
<b>Screws</b>	Very secure fixing Will prevent potential movement of wood.	Need to drill pilot holes.
<b>Nails</b>	Quite secure fixing. No need to drill pilot holes.	Frame could warp as wood expands/contracts or twists over time. Could bend and split wood when hammering in.
<b>Wood Glue</b>	Needs no additional tools or pilot holes.	Not as secure as screws or nails.

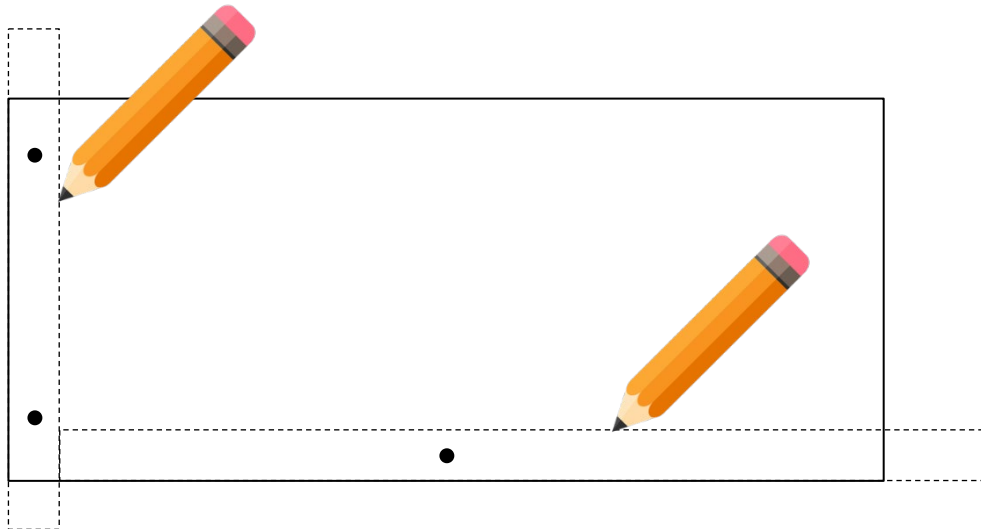
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## EXAMPLE

### STEP 3 – Drilling Pilot Holes (if you are using screws)

If you are going to screw your frame together it's important to drill pilot holes first as this will help prevent the wood from splitting.

Use one of your sides as a guide to mark a line along one short edge and one long edge (see diagram below). Drill a small hole 20mm from the top and bottom of the short edge and one small hole half way along the long edge. (see diagram below)



### STEP 4 – Fix sides and base together

Screw, nail or glue your sides and base. Place your four cans in the frame before tightening screws or fixing the last side to ensure they fit snugly.

You could paint your frame at this stage if you wish.

### STEP 5 – Fill Your Cans And Frame

Fill your cans and frame using the natural materials you collected earlier. I always fill the gaps around the cans with moss or hay. Use bamboo cane, sticks, leaves or broken terracotta pot pieces to fill your tins. Cut your bamboo or stick pieces so their length is 4mm less than the height of your cans.

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**QUESTION 4:** How many different ways can you think of to mount your Bug Hotel in the garden?

Screw or nail to a fence panel, post, brick wall, tree, shed.

Use garden wire to hang from fixing or wrap around tree trunk or post.

Fix to a raised planter.