## **Building trees (X)**

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## More trees, please...

Over the years I have built many different trees. The designs could be roughly split up in two categories: those I use for pictures and those I use for exhibitions.

The first kind tend to be unique constructions, of a higher complexity and generally of a larger size. The second type are made to be built in large numbers, are simpler, more resilient and above all designed to withstand the conditions of the trips to exhibitions.

After the last issue I received a lot of requests for information about one of the trees that appeared on the same page as the editorial so I decided to write this short tutorial on how to build that particular tree.

This design belongs to the second category of trees I mentioned earlier. It has a very simple backstory. I needed a tree that was larger than the ones used to bring along for displays, so that it would not appear too small when placed next to constructions like houses or castles. In addition I needed it to be strong enough to be able to transport it without suffering too much damage on the trips, as it takes quite some time to repair the trees each time.

Experience has shown that the biggest issues with trees are the fragility of the trunk and leaves falling off. The issue with the trunks is easily solved using a Rigid 3mm D Hose. inside the trunk, but the issue with the leaves is harder to solve. Since these are flexible parts, the connection with other pieces is less strong than is the case with rigid pieces, and building such leafy trees tended to yield unstable structures. Some solutions meant inserting the leaves in the tree trunk (connected to the bricks or even the rigid 3mm D hose.), but this limited the construction and the number of leaves I could use. However, in 2012 an interesting new element appeared, the Plate Round 2x2 with Pin Hole and 4 Arms Up, which opened up an opportunity to build better trees.

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Plate Round 2 x 2 with Pin Hole and 4 Arms Up.

This element provides 4 connection points that can firmly sustain the leaves, allowing you to connect up to two leaves on each arm without them coming off easily. This means up to 8 leaves per part can be connected. In addition the part allows a Hose Rigid 3mm D. to pass through its centre so the trunk doesn't lose any of its stability. Combining this piece with a brick round 2x2 and a plate round 2x2 provides the perfect starting point for a tree trunk section with leaves attached at intervals that don't make it look too empty.



Parts combination to make the trunk.

This simple combination can be used to build trees of different heights, adding more or less combinations of these three pieces, depending on the height you wish to obtain.

One of the most important rules to avoid leaves falling when you use rows of multiple leaves connected to the same arm is to connect consecutive leaves to two points. The visual effect of using more trees is better than making them more leafy.

Since the arms of the new piece allow you to strongly fit the leaves, I have attached Plant Leaves 6x5 and Plant Leaves 4x3 together at each level, creating different lengths of leaves, and I have connected them with Plant Leaves 4x3, which are always connected by two points, giving them more stability.

Since the arms on the Plate Round 2x2 with Pin Hole and 4 Arms Up allow you to turn the leaves easily it is always possible to find a way to connect the leaves. In this way, each segment of the tree has 4 leaves connected to the trunk and a variable number of leaves that interconnect the first 4 leaves by two connection points each. Adding more leaves with a double connection on or under the first 4 allows you to make the tree look more leafy.

The height of the trees can vary, depending on the length of the Hose Rigid 3mm D used. You only need to add brick round 2x2 for the bottom of the tree trunk and the number of combinations of a Plate Round 2x2 with Pin Hole and 4 Arms Up, a brick round 2x2 and a plate round 2x2 that you need to get the desired height.

At the top of the tree the leaves can be connected directly to the Hose together with a brick round 1x1 or cone 1x1, to give it a narrower look at the end

Finally there is the base which in my case also serves to put a marker on the tree to identify the owner so they can be used together with other builder's trees and still easily separated out afterwards.

## **Pieces used**

The list of necessary elements is quite simple and can be varied in many ways, so this is a mere approximation of the parts you will use for your own trees. As in previous articles, names are based on those used on the Bricklink website[1]: For the trunk:

- A Hose rigid de longitud mayor a 16L de cualquier color.

- A variable number of brick round 2x2 reddish brown for the bottom part.

- A variable number of combinations of Plate Round 2x2 with Pin Hole and 4 Arms Up, brick round 2x2 and plate round 2x2 reddish brown.

- 1 brick round 1x1 reddish brown and 1 cone 1x1 green for the top.

For the base:

- 1 plate 6x6 green and 1 plate round or cheese slope with the identifying colour.

For the leaves:

- A variable number of Plant Leaves 6x5 and Plant Leaves 4x3 of the colours you choose.

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[1] Bricklink: http://www.bricklink.com

