

ON THE HOUSE



Building a Tree House

by James Carey and Morris Carey

True Value June Project of the Month

In the movie "Forrest Gump," Forrest said he and his lifelong friend Jenny were so close growing up that they were like "peas and carrots." That vegetable combination would be an apt descriptive term for children and tree houses. Kids love them.

What is it about a tree house that can put a smile on a child's face? Perhaps it's that such a perch allows them to be high off the ground and see things that can't be seen with little feet planted firmly on the ground. Maybe it has something to do with being enveloped by nature -- wind, branches, leaves and birds and squirrels. Or it might be the independence that comes from having one's own secret hiding place -- a place from which to "spy" down upon others. Whatever the reasons, building a tree house can be an exciting parent-child experience; one that will be remembered long after the tree house is gone.

A tree house is essentially a platform upon which there could be a roofed shelter and an open area, fenced around. There must be a small space for access by a ladder, but it should be otherwise enclosed to prevent falls. Unlike plans for a playhouse, those for a tree house are not feasible because no two trees are alike. Building a tree house is one of those design-and-build-as-you-go projects.

There are basic design criteria that will ensure a safe and lasting tree house without jeopardizing the life of the tree. The process involves notching and cutting branches and nailing into the tree. Consult an arborist or tree surgeon for advice so as not to harm the tree.

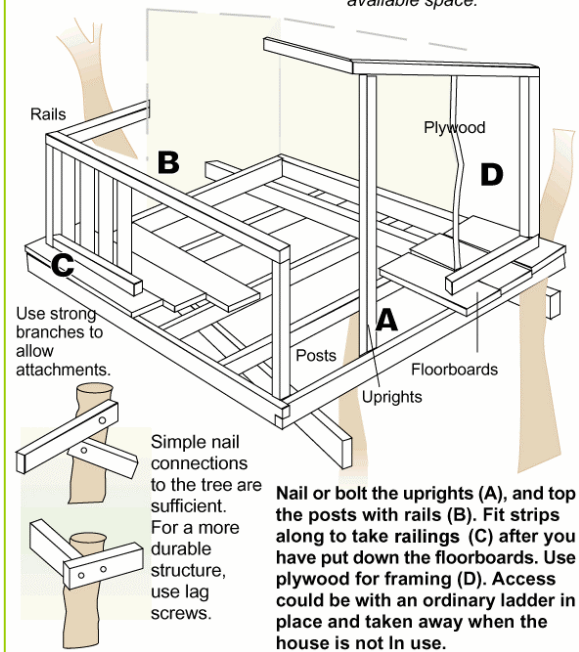
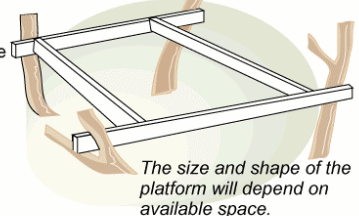
The biggest challenge to building a tree house is finding a tree that will serve as a foundation. The tree must have a rigid trunk and strong branches that will allow a suitable size at a convenient height. This can be asking a lot of one tree. Sometimes a tree house can be supported by two or more trees. For example, a tree house can be nestled into a grove of redwood trees. In contrast to the traditional single-tree, branch-supported tree house, the trunks support the floor system with this method.

Since trees are alive and grow, the tree house must be designed to accommodate their changes. Connections to the tree should be made using **nails** or **construction screws**. **Lag screws** can be used for added stability and a more durable structure. Avoid lashing the connections with rope, cable or wire, as each can strangle the tree or limb as it grows.

The first step is to locate a horizontal plane in the tree where a level floor or platform can be built. The size and shape of the platform will depend on the available space; however, a square or rectangular frame can maximize space and make construction easier. Begin the platform frame by fastening two reasonably parallel **2 by 4 beams** to the tree branches. Next, install two parallel beams perpendicular to the first two beams. The trunk or sloping branches might need to be slightly notched to accommodate the platform frame. Notches also will offer added support for downward loads and will prevent slipping. Complete the platform framing

Tree house is every child's dream.

The first and most important step in constructing a tree house is to determine a horizontal plane in the tree where a platform or floor can be built. Then build the rest of the structure from this base.



Continued... see reverse

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by installing joist spaced at 16 inch to 24 inch centers. The joist can be hung from the frame using **joist hangers** or end-nailed using nails or construction screws.

If the shape of the frame for the platform doesn't look anything like a square or rectangle, consider installing the floor joist on top of the frame. This will allow greater design flexibility by permitting one or more tree branches to pass through the floor.

Once the floor frame is complete, the floor material can be installed. **Fence boards** are a good choice. They are rustic looking, easy to install and, when properly spaced, will allow drainage that will prevent rot. Fasten the floorboards to the floor framing with nails or construction screws.

If your tree house will have a roof or partial cover, uprights consisting of **4 by 4 posts** should be installed before the floorboards are. Posts will also be needed as support for a rail that will surround the entire perimeter of the tree house. This is a safety requirement. All posts should be attached to the floor frame using **nuts, bolts** and **washers**. Use two bolts at each connection.

The roof, which should have a slight pitch for watershed, can be supported in much the same fashion as the floor -- rail frame and joist fill. Painted **plywood** makes for a good, watertight roof. Use brown or green **acrylic latex paint** that will blend in with the tree.

While a roof can keep little ones dry, it is the rail that will keep them safe from a nasty fall. The rail consists of support posts, a bottom rail fastened to the floorboards, a top-cap rail fastened to the inside face of the support posts and the pickets. The rail can be solid or made of pickets from fence boards spaced no more than 4 inches apart.

Checklist:

- Nails or construction screws
- Lag screws
- 2 x 4 beams
- Saw
- Joist hangers
- Fence boards
- 4 x 4 posts
- Nuts
- Bolts
- Washers
- Plywood
- Acrylic latex paint (brown or green)
- Wooden closet pole dowels
- ½" Rope

In either case, the material should be fastened from the interior so outward-thrusting movement cannot weaken the rail.

The same holds true for siding at walls. Fasten plywood or fence boards from the interior to maintain strength and prevent falls. If you fasten from the outside, only the fastener takes the load, and it could be pushed out.

Once the tree house is completed, you will need a means of getting in and out of it. One often-used means is boards nailed to the trunk. This method involves excessive nailing that can injure the tree. It also isn't very safe. Safer alternatives are a wood frame ladder made of 2 by 4 rails and 1 by 4 rungs. Another more kid-popular option is a rope ladder, because it can be drawn up to prevent "unwanted intruders."

A rope ladder can be assembled using **wooden closet pole dowels** and **half-inch rope**. Cut the rungs to about 18 inches, and drill two parallel 5/8-inch holes -- one inch in from each end. Thread the rope through holes, and place a knot every 16 inches.

A tree house is for keeping "bad guys" out, "good guys" in and spying on the "enemy." It enables a child to be the master of his own house and provides him with memories as indelible as the initials so carefully carved into its host tree.

Morris and James Carey are nationally recognized experts on home building and renovation. They share their nearly half-century of experience as award-winning licensed contractors with millions of people nationwide through weekly radio programming and a syndicated newspaper column both titled "On The House." Visit their web site at www.onthehouse.com for more home improvement tips and information.