instructables

## Build a log cabin Playhouse for under \$300

by MikeO on June 30, 2007

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## Intro: Build a log cabin Playhouse for under \$300

I noticed that my 3 year old Son always gravitated toward the playhouses whenever we went to a big playground. So, I put Playhouse on my list of things to get for him.
Yeah well, after shopping around for a while I found that a Playhouse of any decent size was $\$ 1200$ for a striped down, 4 'x 6 ' box. Then there was the Log Cabin one that I thought was really cool but it was $\$ 3700$, marked down from $\$ 4200$ because it was a floor model!

Then came my inspiration, my Neighbors put in a Stockade fence this spring and were resting the panels against their garage until they used them. I walked outside, glanced over and thought... Dang, those look like the side to a log cabin! And so my planning began.

DISCLAIMER: This structure will be as durable as you make it. If you do a crappy job and it falls down on your kids head it's not my fault.

## <Update>

My Son has been using this playhouse almost every day, even when it's raining. When I pick him up from daycare all he wants to do is go into his playhouse, He has even eaten his dinner in there more than once. On several occasions I have had to carry him inside screaming in order to put him to bed.

## Build note:

1. My Son for some reason has been leaving the front door open and he runs into the playhouse and bounces off the back wall. As a precaution I decieded to pre-drill and screw the slats on the back wall to the stringers. He didn't knock any slats off but I figured just in case.
2. My dog has been digging on the side of the playhouse and sniffing through the floor of the playhouse. I looked under and didn't see any animals but I decieded to get some metal mesh and stapled it all around the bottom of the playhouse and into the ground. This would have been easier to do and probalbly would have looked much better if done in the inital steps of construction.


## Image Notes

1. Playhouse size if $5^{\prime}$ wide, $5^{\prime}$ deep and 6 ' high. Total floor space including the front porch is $5^{\prime}$ by 8
2. If you couldn't tell, I am taking this picture through my son's swing set. We were lucky on this one. The lady that cut's my wifes hair wanted to get rid of it since her daughter didn't use it any more. Free, just take it away. cost about $\$ 50$ in new hardware and stain. Look pretty good for a 15 year old swing set.

## step 1: Stuff needed to buy or have

You will probably want at least two people to move the panels around and lift them in place. I am a pretty big guy so I just tipped them up the long way, leaned them against my back, grabbed the top of the 8 ' section, leaned forward a little, and carried them where I wanted them.

Time: This took me 4 weeknights (6:30pm - 8:30pm) to level the ground for the floor and one very long Saturday and Sunday to finish the build.

## Parts List:

6-6' x 8' stockade fence with $2 x 3$ supports
$4-4 \times 4 \times 6$ ' Treated timbers
$2-2 \times 4 \times 8$ ' Treated lumber
$2-2 \times 4 \times 8$ Lumber
$1-2 \times 3 \times 8$ ' lumber. (As straight as possible)
$1-1 \times 3 \times 8$ ' lumber
1 roll of Roll roofing

- 1 lb Box of 1 1/4" Deck Screws

1 lb Box of 3" Deck Screws
1 lb Box of $7 / 8$ roofing nails (left over from another project)
3 Gallon of Deck stain (2 light cedar, 1 dark green)
2 Packages of Cedar shims
Total Cost for $\mathrm{me}=\$ 268.42$
Tools Required:
Shovel: Spade
Tamper
4' Level
Hammer
Drill/Driver

Circular Saw
Chalk line
Paintbrush
Utility knife
Terminology used in this instructable:
Slats = the part of the fence panels that look like the log
Stringers $=$ the three $2 \times 3 \times 8$ ' long boards on the fence panels that keep all of the slats together
Other stuff:
Make all of your cuts with the circular saw from the inside of the panels to reduce splintering that can be seen from the outside. This can sometimes be difficult but take your time and it will look a lot better

## step 2: Foundation

If you are willing to spend some more money and time, I would suggest that you dig out and lay down some crushed stone under the $4 \times 4$ supports. I didn't have any extra of either so I just made the dirt level and tamped it down as much as I could.

Pick the location for your playhouse.
It should have enough room around it that it does not get in the way of other things like a swing set or kiddy pool. My back yard is Freaking tiny so the only location I had available was either behind the garage where no one can see it, or in the back corner where a raised flower bed once was. My Wife and I decided on the back corner. This made my life a little more complicated because I had a LOT of leveling to do and I will have to move the swing set back about two feet for safety.

## Cut the $4 \times 4$ supports to length.

Measure the outside distance of the two outermost stringers on your stockade fence panels. Mine were $561 / 4$ " so that is how long I cut my $4 \times 4$ 's.

## Position

You need to position the $4 \times 4$ floor supports so they will fall directly under the stringers in the wall panels. Using the $2 \times 3 \times 8$ ' lumber that you purchased set it along one of the Fence panels and mark where each of the support piece are. This will then be used to position and level the $4 \times 4$ floor supports.

Level, Level, Level, Level,
Take a look at your location and determine the lowest point. You will need to start from there. Tamp that ground down as much as you can then place and level the first $4 \times 4$. This was the front for me
I found it easiest to then place the $4 \times 4$ for the back and level that.
Once you have leveled the Front and Back supports you can then start to level the center two.

## Stabilize the base

Position the two $2 \times 4 \times 8$ ' pressure treated lumber on the $4 \times 4$ supports so they fall in between where the supports from the fence panel will fall. Screw the $2 \times 4$ 's to the $4 \times 4$ supports to prevent them from moving while backfilling.
Fill in with any extra dirt to stabilize the $4 \times 4$ floor supports. Leave 1 to 2 inches of the $4 \times 4$ 's above ground level to allow air movement under the playhouse to prevent rotting.


Image Notes

1. one of the markings on the $2 \times 3$ board to show me where to place the $4 \times 4$ 's


Image Notes

1. Dangit... This was a lot of work


Image Notes

1. $2 \times 3$ marker board just checking to ensure the $4 \times 4$ 's are properly positioned


Image Notes

1. Secured the $4 \times 4$ 's with the $2 \times 4$ pressure treated lumber

## step 3: Cutting the Panels

Select the nicest fence panel you have to use for the floor. Remember, your kid will be crawling, rolling, and laying on this floor
Support the fence panel up off the ground using the cut off pieces of $4 \times 4$. Make sure you have the stringers facing up, and that the $4 \times 4$ 's are inside the outermost stringers.
Using your circular saw cut along the outside edge of each outermost stringer.
Fit the floor but don't secure yet
Lay the newly cut floor panel onto the $4 \times 4$ floor supports and adjust the $4 \times 4$ 's to exactly fit the floor panel.

## Cutting the Front and Back wall panels to size

Measure the front and back wall panels so they will be six feet high. You can deviate from this slightly so you end with a full width slat.
Snap a chalk line and make the cut.
You must now cut the front and back to the proper width. You only want to have a slight overhang past the outside stringers to cover the slats on the side panels. From the back of the panels, measure out the thickness of the slats ( $3 / 4$ for me) from the outside edge of the outer stringers and snap a chalk line. Cut along that line from the inside of the panel to reduce splintering.
Measure and mark the top center of the front and back panel. Measure and mark five feet from the outside bottom edges of the Front and back panels. Connect those three points with a chalk line and snap your mark. Cut along that mark to set the roof pitch.

## Cutting the Side Walls to size

Mark the height of the side walls to the same height as the lowest point on the front and back walls, should be around five feet. Mark this height with a chalk line. The side wall panels must have a larger overhang than the front and back in order to cover the corner where you screw the end stringers together. For me this was an overhang of $21 / 4$ inches. Mark that overhang on the edge of each panel with a chalk line and as always make the cut from the inside of the panel.

## Cut the Roof panels

This would have to be the most complicated and labor intensive part of this build.
You will be removing each of the stringers on the last fence panel and screw them to the opposite side of the panels in the needed locations.
On the front panel, measure the distance from the top point to the outside edge along the angle. Transfer that measurement to where one of the stringers must be on the roof panel. The other stringer should be two inches in from the top edge. This is to prevent the top stringers on the roof panels from binding with each other. Use the $2 \times 3 \times 8$ board for the fourth stringer. (During Layout, make sure you use the point top of the fence panel for the peak of the roof. This will allow you to use the most of the panel and hide the pointy parts with the ridge cap. Also, if you have any leftover material that you need to trim off, make sure you take if off the pointy end "about 1 inch for me") Remove and reposition only one stringer at a time to keep the panel as straight as possible.
Once all stringers are in the correct location, Measure and mark the center of the fence panel with a chalk line. Cut the fence panel into the two roof sections.


Image Notes

1. Setup the $4 \times 4$ cut off pieces to support the fence panels off the floor for cutting. You can line this up later on to use to cut the trim pieces later.


Image Notes

1. Cutting from the back of course


Image Notes

1. First panel ready. This one will be the floor


Image Notes

1. Ensuring the floor fits properly


Image Notes

1. Cutting the Front panel to hieght. Just over 6 feet


Image Notes

1. Cutting the roof angles. 5 feet side, 6 feet peak.


Image Notes

1. Cutting the Front to width. The slight overhang will hide the end grain on the side panel.


Image Notes

1. Cutting the side to length. 5 feet high


Image Notes

1. Chalk line showing where to cut the side panels to width


Image Notes

1. OK, This part really sucked... Taking off the stringers in order to replace them on the other side in the correct location for the Roofing panels


## Image Notes

1. Trimmed just the tips of these off in order to keep as much overhang as possible.
2. Panels cut to width


Image Notes

1. Side panel now cut to width


Image Notes

1. Stringers are now in the proper location, Chalk line shows where I will be cutting the panel into the two separate roof panels


Image Notes

1. That is a lot of extra stuff
2. hmmm... maybe I could make a few hundred balloon boats, and post a instructable about that.

## step 4: Mark and cut Windows and Door

You now need to select the locations of the windows and doors
For my setup I made a 24inch wide by 48inch high door since that fit almost perfectly between the stringers
Cut the window out all the way but only cut out some of the door. If you cut out the whole door the front panel would be too unstable while you are moving it around.


Image Notes

1. Chalk line showing door location


Image Notes

1. Window cut out all the way
2. Door only cut out enough to get the saw in there afterwards.

## step 5: Stain everything

Now that the majority of your pieces have been cut you should stain and seal them prior to assembly so the playhouse will last as long as possible. Maybe even your grandchildren will use it. Or, you can use it as a shed at a later point. Make sure you seal the front and back of every piece including the floor panel.


Image Notes

1. My Son helping me stain


## Image Notes

1. Panels finished Note: I didn't want to waste stain on the door cutout, but it turns out they are used for the porch so go ahead and stain them also.


## Image Notes

1. Floor panel stained
2. My Son helping me secure all the dirt around foundation with water.

## step 6: Secure the floor and Walls

You will most likely have to use some of those Cedar shim's since the stringers will most likely be a little thinner than the $2 \times 4$ treated lumber already there.
Put one 3" Screw directly through the floor panel stringers and shims into each of the $4 \times 4$ 's.
Setting the first wall
Screw one of the $2 \times 4$ 's into the side of the floor and part way into the other end of the $2 \times 4$.
Lean the back wall up and secure it with the $2 \times 4$.
Make sure the back panel is perfectly positioned since all other walls will key off this one. Screw the back panel to the floor with $3^{\prime \prime}$ screws by screwing at an angle through the bottom edge of each stringer "two screws each, pre-drilling through the stringers will make this easier".

Now just lean the side wall opposite the $2 \times 4$ support up, kick it so it is firmly against the back panel and screw it into place through the pack panel into both stringers. Secure the bottom of the side wall in the same manner as the back.

Remove the $2 \times 4$ support and add the other side wall.
Now cut the remainder of the door out and screw it into place from the front.


## Image Notes

1. Stained, Secured, and Level


## Image Notes

1. Some extra supports that I pulled off an extra panel cut off. I thought about doing this after I stained everything which is why it's white. I'll stain it later.
2. Secure the end panel with a $2 \times 4$


Image Notes

1. Stringers screwed together


Image Notes

1. Finished cut out door
2. Panels are finished

## step 7: Put up the roof

Lift the first roof panel up and onto the playhouse. Make sure you have your drill and a few screws very handy because this won't stay up there on it's own while you go get one.

Screw down through the roof stringers into the stringers of the front, back and sides with 3 inch screws.


Image Notes

1. First roof panel is up and secured


Image Notes

1. Both roof panels are now up and secured


Image Notes

1. This gap turned out to be a very good thing. It left space for a ridge cap that I cover in step 10

## step 8: Cutting the door and trim pieces

Now to cut the door, shutters and fascia boards.
I'm not going to give you measurements for this because they will most likely vary per playhouse. Plus you should measure prior to cutting out so you know you have the exact spaces.


## Image Notes

1. Brace on the back of the door


## Image Notes

1. Door ready to stain Note the skinny piece. I had to rip a slat to width to make the door to the proper width. Easist way to do this is make the rip cut before taking the slats off the stringers. You may hit a nail but better that than trying to hold a single slat while ripping.
2. Pieces for two shutters
3. Front Fascia

## step 9: Front Porch

Now to cut and assembling the front porch.
The front porch and railing will support the roof overhang and also keep adults from walking off the side of the front porch, remember, the side of the front porch roof is only five feet high... remember that!!!

This is a lot of work but it really makes the playhouse.
I decided later on that I would apply slats to the two outside edges of each $2 \times 4$ post because I didn't like the looks of the generic $2 \times 4$ posts. I think it looks a little chunky now but better than before.


Image Notes

1. Cut the main support posts for the porch roof at a matching angle of the roof stringers


## Image Notes

1. Using a cutoff as a spacer
2. Screwed them directly to the side of the floor.
3. hmm, someone's watching me.


Image Notes

1. Starting the front of the porch


Image Notes

1. Showing the angle on the main porch support holding up the roof stringer.


Image Notes

1. $2 \times 4$ top cap. Screw the top cap on from the bottom through the $1 \times 3$


Image Notes

1. Porch railing on the other side


Image Notes

1. I applied slats to the outside faces of the post holding up the porch roof. I didn't like the $2 \times 4$ look.


Image Notes

1. Can't really tell from this picture but the slats have been applied

## step 10: Installing the Roof

Now to cover that gap at the peak in the roof with a fence slat.
Install for lack of a better word (Cleat) inside the front fascia, and also apply one to the center stringers on the front and back wall. The cleats should be flush with the top of the roof peak.

Now cut one fence slat that will go from the cleat on the front fascia to just past center of the front wall cleat. You need to make this cut at a 45 degree angle. Then cut another slat from the back wall cleat flush with the back of the roof, ending at the front wall cleat, again making a 45 degree cut so the two piece of the ridge cap will sit perfectly flush.

Now just screw the pieces of the ridge cap on and you have a nice rounded top to the peak of your roof.

I precut all the sections of roll roofing to 8 feet 1 inch. I then slid them into place doing the side panels first. I nailed every 4 slats about 8 inches from the edge leaving any overhang on the back of the playhouse.
Once both sides were up and nailed on, I rolled on the center roofing and nailed that down about 2 inches from the peak and then about 4 inches from the edge again every 4 slats.

I was told that after the first couple hot days the roll roofing will flatten itself out.


Image Notes

1. Cleat screwed into the front trim.
2. a little shim I needed because I didn't make this stringer exactly flush with the side of the panel.


Image Notes

1. Marking where to cut the front ridge cap slat. Notice the cleat is flush with top.


## Image Notes

1. Ridge cap installed. Nice and rounded so the roll roofing should not get cut over time.


Image Notes

1. Cleat on the front panel.


Image Notes

1. 45 degree cut on both slats that will make up the ridge cap


## Image Notes

1. getting ready to cut the first sheet of roll roofing
2. Using a scrap slat to cut against


Image Notes

1. Roofing is now finished.

## step 11: The Shutters

The shutters are for more than just looks. They actually secure all of the little pieces of siding that are left when cutting out the windows.
each shutter is made from six individual pieces. Four that are 24 " long and Two that are 8 " long. Again, stain all sides of these pieces prior to installing.
Clamp the first long piece along the edge of the window ensuring it will overlap top and bottom onto full length siding slats. Now, go inside. You need to pre-drill all of the small slats since they WILL split if you don't. Then just secure the first part of the shutter from the inside through each slat.

Now, the second long piece of shutter is just for looks, and it is usually over one of the stringers so you won't be able to screw it on from the inside. Just secure the piece with two screws. Pre-drill them and locate them under where the shutter cross pieces will go.

Then pre-drill and screw in place the cross pieces from the front.


## Image Notes

1. Clamp it where you want it.


## Image Notes

1. Pre-drill and screw through each slat into the back of the shutter


Image Notes

1. Screw from the outside
2. Pre-drilled hole


Image Notes

1. Cross member, pre-drilled and secured. notice it covers the screw holding the outside piece of the shutter.

## Related Instructables



DIY Indoor Playhouse by creatrope


A "Jungle
Cruise"
Playhouse *updated (slideshow) by madhatter1138


The Princess Playhouse by alinke


Home Projects (guide) by fungus amungus


Craftsman Workshop of the Future Contest Winners (guide)
by Contest Robot


How to Build a Cardboard
Castle by Mr McGroovy


DIY Magic
Mirror - Arduino
Powered
(Updated 11/09)
by alinke


Various Crafts (slideshow) by jelenamitic77

## Comments

## 16 comments Add Comment

Rock Soldier says:
May 22, 2009. 2:35 PM REPLY
Dude! I want one! And I'm a teenager.
Can you make me one pwease?


Iynn1986 says:
Oct 4, 2008. 7:14 PM REPLY
I was just wondering where you got your fence from b/c our Lowes doesn't sell the rounded kind.

builderbrad says:
Mar 27, 2008. 6:27 AM REPLY
Id like to Thank Mike O for the awesome plans here, I went to my local Lowes and got everything on the list, all for $\$ 249$. However, I have shanged a few things...such as adding 2 feet to the floor length and 1 foot to the height. I also added a piece of 18 "x24" plexiglass for the skylight Im putting in. (alredy had that). All in all, I used these basic plans and now I have a 7'x 4.5' x 6' with an additional two foot front porch. Thanks Mike!

Jan 21, 2008. 8:52 AM REPLY
Great instructable!
One note, I'd like more detail on attaching the walls to the base. The stockade material isn't the greatest. You said you screwed them into the base with pre drilled screws. Any faming there? Just toe-angled in?

MikeO says:
Jan 21, 2008. 12:00 PM REPLY
Yep, just toe nailed/screwed. The wall stretchers are located directly over the stretchers in the floor so you are screwing stretcher into stretcher.
As a side note. there has been about 12" of snow on the roof so far this winter and it has stood up very well

## SlothOnSpeed says:

Dec 2, 2007. 12:34 AM REPLY
You might want to add a comment to one photo in step 9. The photo is the one where you show that you need inside and outside door handles. There's something (or someone) lighting up the inside of that playhouse. Whatever could it be?

BTW, you're a great dad and your son will never forget the playhouse you built just for him
ddowdie says:
Sep 22, 2007. 2:48 PM REPLY
I cannot seem to print out the detail pictures. When I print the instructions there is a cut out. Help!
vlackey says:
Aug 27, 2007. 12:25 PM REPLY
This is one of the best instructables! Just one minor suggestion, for those that
live where the ground can stay wet for awhile. You might want to use cinder
blocks or bricks under the foundation to keep the wood up off the ground so it won't rot over time. In wet areas, that can be a short amount of time too.
Thanks again for the great ideas!
vlackey

## melissac says:

Aug 16, 2007. 12:28 AM REPLY
I love it! I stopped to check prices today on a similar style for my 8 and 9 year old, and was shocked to discover they were $\$ 2800$ and $\$ 2900$. Any suggestions for building a larger version? My boys are tall.

MikeO says:
Aug 16, 2007. 5:04 AM REPLY
Well, I know they make 8' high fence panels. You could probably use them. You would loose the front porch since the floor is made up of a single panel 8' long, if you use larger panels for the sides I would guess you would get 7' wide walls, so you would need to trim your floor to fit the exact size of the house. I would say go find some 8' high panels, measure them and make a cardboard model of what you want. "I cut up cereal boxes for my model" Take your time, and Good luck.

## BryGy says:

Jul 2, 2007. 11:11 AM REPLY
Great project. I'm going to look at implementing the stockade panels as a roof for my kids playfort. How did you fix the gap at the roof peak?

## MikeO says:

Jul 3, 2007. 9:58 AM REPLY
I have just updated it. Take a look at step 10. It turns out that the gap was a really good thing to have.
carpespasm says:
beautiful. i love it. well documented, well done, and i love the idea of using the fence panels for it. You could build a house like that. hope your son enjoys and uses the heck out of that thing.

