

How To Build A Log Cabin Like The Pioneers Did

Building techniques have developed considerably over the last couple hundred years. But in the case of a national emergency, and without access to all the technologies we've developed in recent years, how many people would be able to build a shelter in the same way our pioneers did?

When they first arrived in America, pioneers carried bare essentials and had minimal tools to hand. They are likely to have packed very similarly to the way most preppers pack their bug out bags – only with what is fundamental for survival.

The earliest log cabins were built in the mid-1600's in present day Delaware, by Swedish and Finnish settlers. They had already developed their skills through years of practice in their own countries, and they were greatly refined by the time they brought their log cabin building techniques to the US.

But how exactly did they build these simple, yet durable structures? As Preppers, it would be beneficial to learn how to build a cabin like the pioneers did. After all, if you find yourself living out of the forest, what better material to use to build a shelter, than trees.

Most of the pioneer constructions would have consisted of a small one roomed cabin; around 16 feet square. You might decide to [choose another size or design for your log cabin](#), but for the purpose of this article, let's follow the same size build.

A log cabin build can be split into 5 steps; log selection, site preparation and foundations, walls, windows and doors, and roof. Pioneers would have had very basic tools such as an axe and a saw, so we'll stick to only using those tools

throughout this tutorial.

Log Selection

When the pioneers first built log cabins, they had the luxury of being able to cherry pick the best logs for their home. These old growth trees would have been straight, tall and wide in diameter, and would therefore have fit almost perfectly together, without the need for much chinking.

It's likely that your area won't have many old growth forests around, so your best option is to find straight, long trees that are around 10-12 inches in diameter. The species of tree you choose will depend on what is most widely available in the area you decide to build.

To build a 16 x 16 foot log cabin that is around 9ft high, you'll need roughly 10 x 18 foot logs, for each of the four walls. You'll also need an additional 10 logs of shortening lengths to create two gable walls. For the purpose of these instructions, we'll use cedar trees. Cedar trees grow on average to 50ft, so you'll need to fell approximately 15 trees.

The most effective way to fell trees is to make a cut in the direction the tree is leaning, just above knee height. Then make an upwards cut to take a wedge shape out of the tree. On the opposite side, just above your wedge cut; make another cut until the tree falls.

Once you've cut all your trees, you'll need to debark them while they're fresh. To do this, place your axe at 30 degrees to the bark, and chip away until you've taken all the bark off. Ideally you'd now let the logs dry out for a few months, so depending on how quickly you need your cabin, you may or may not do this.

Site Preparation and Foundations

To prepare the site, pioneers would likely have cleared the site from any trees, stumps, large pieces of rocks, debris, leaves and grass, and raked the ground over. There would have been no need for the heavy duty foundations we see in today's log cabins, because the ground usually doubled as the earth floor of their cabin.

At this point, it would have been vital for the person building the log cabin, to think about which way to orient the cabin to make the most of the sun's energy, and heat the cabin. This is something you'll also want to take into consideration because it's likely that if you're building a similar shelter you won't have access to grid power.

Even though the settlers' cabins didn't have sturdy foundations like the ones you'll see today, they did use some form of foundation. Typically, four large flat stones would have been placed in each corner for the logs to lie on top of.

To place these stones, you'll need to lay four of your logs on the ground, and see where they cross to put the stones in position. The bigger, and the flatter the stones the better, they'll also need to be of similar height. You might also want to place some stones across the length of each log to provide extra support.

Walls

In today's log cabins we have a wide range of log profiles (i.e. species and log shapes) and corner joins (i.e notches). When the pioneers settled, they normally used two types of notches. They would usually build a temporary home using round logs that they would saddle notch to join.

They would then live in this simple home whilst they built a more permanent home from square hewn logs which they would

join with a more complex dovetail notch.

For the purpose of these instructions, we'll opt for the simpler join – the saddle notch. The dovetail notch requires a lot of carpentry experience and is not ideal if you're a novice, looking to [put up a quick and simple shelter](#).

The first step in raising the log walls, is to choose four of your widest and straightest logs to act as your base. These are called your sill logs and they will sit directly onto your stone foundations, in a square shape. To notch each log, use your axe to remove a U-shaped chunk from the underside at either end of the log. This will allow the logs to join, and sit perfectly on top of the log below.

Once you have your basic sill logs in place, you can continue to notch each log and build the walls up until you have reached the desired height of your cabin (minus the roof).

Windows and Doors

Glass was not a common resource when the pioneers built the first cabins, and so usually there weren't any windows in the building. If there were, they were typically made from animal skins. Alternatively, some of the early cabin windows were made from paper greased with animal fat which made them both waterproof and translucent.

To create any door or window openings, when you reach the height that you'd like the opening at, take your saw (or axe if that's all you have) and create a vertical cut for as far down as needed. For example, if you're creating an opening for the door, start making the cut around 6 $\frac{1}{2}$ foot, and make a vertical cut all the way to the floor, and then make a parallel cut 3ft across.

The door will have been made from boards that will have been split from large diameter trees. It's important to keep

openings to a minimum – the less you have, the less you'll have to worry about heating your cabin.

Roof

The most common way for pioneers to roof their log cabin was to use the purlin and rafter technique. This involves building two gable walls (i.e triangular shaped walls) that form the basis for supporting the roof.

To build the roof, you should build the gable walls, using logs that decrease in length, until you are half way up. Then, using the same notching technique you used on the wall, notch two logs which will join the two gable walls. Continue building the gable walls until you reach the peak, and then join the two walls with one last ridge log.

The pioneers actually used a very advanced and long-lasting method to roof their cabins. They would split logs to use as roof rafters and then create individual wood shingles which they would use to finish the house.

A much easier method would be to use smaller logs to create roof rafters, to which you would then lay branches, sticks, mud and leaves.

Finishing the Cabin

Most of the pioneers' cabins will have been built with a stone or brick fireplace at one end. This provided a quick and easy way to heat the cabin which is essential in cold climates; it also provided them with a way to cook the food.

If you want to incorporate a fire place into your cabin, you'll need to leave a gap in your roof that you can lead a wattle fireplace chute out of.

The last thing you'll need to do to finish your cabin, is seal

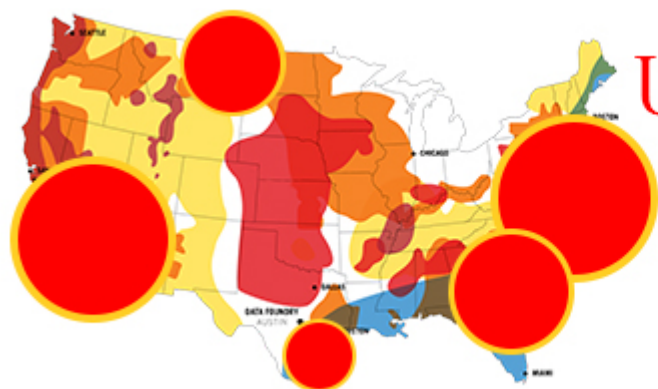
all the gaps between the logs. This is known today as 'chinking', and whilst we've developed many flexible and durable solutions to use on today's age cabins, if you're building a cabin in the same way as the pioneers did, using only the natural and basic materials to hand, you'll need to make your own.

Larger gaps would have been filled with sticks or small rocks, and then sealed with a mix of clay (or dirt), water, straw and ashes. This would prevent any drafts from entering the cabin and keep all the heat inside.

Your Very Own Pioneer Log Cabin

You might have expected a pioneer log cabin to be basic and simple in terms of construction. Of course, compared to the milled logs that are used today to build 2,000 square foot cabins, these early cabins might not look as grand and glamorous, however they were built by masters of the trade and are not as easy as they look to replicate.

To build your own log cabin may be necessary if we ever find ourselves in a position of losing our homes due to a natural disaster, however you will most likely want to simplify the process as much as possible, and build a small yet strong structure such as the example we followed in this article.



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