# 8 Fire Lays for Building Better Campfires

*Ever since the dawn of time, the use and control of fire have helped humanity evolve and accomplish remarkable tasks. Thanks to fire, humans could step out of the darkness, heat their shelters, and cook their meals, thus avoiding food-borne parasites and bacteria. Fire also helped them ward off predators or bring destruction to their enemies. Gathering around a fire helped them develop social relationships and form alliances.*

These benefits of fire are truly amazing if you stop and think about it, and what's even more unusual is that they haven't changed over the millennia. We still use fire to cook our meals, light up the night, or keep us warm during those cold winter months.

## The fire formula

To start a fire, you only need three things: fuel, air, and heat. This fire triangle hasn't changed in the last million years, and without one of those elements, you won't be able to start a fire.

Fire is nothing more than a chemical reaction, one called combustion, a type of reaction that occurs when a source of combustible fuel is exposed to a source of heat in the presence of oxygen.

If you find yourself in the wilderness and want to start a fire, you will have all the needed elements to start that life-saving campfire. Air is all around us, and you will probably have a source of heat like a match or a Ferro rod to obtain some sparks, while fuel can be easily gathered from your surroundings.

## Fuel

This is perhaps the most crucial element in the fire formula, and it plays a critical role in building your campfire and its overall existence. Wood is abundant in nature, and it will probably be your first choice as fuel. Compared to liquid fuel, wood is inexpensive, readily available, and much easier to control.

You can start gathering wood for your campfire but remember the age-old practice of picking the type of fuel you need based on its use. There is progress for going from a spark to a flame, and the type of fuel you gather plays a vital role in the overall success of your campfire.

## Tinder

The tinder you gather needs to be soft and light, with a large surface area that can be easily ignited. The tinder you intend to use should be any combustible material that can be ignited with nothing more than a tiny spark. For example, dry grass or leaves, pine needles, wood shavings, and cattail fluff can be ignited without struggling at all.

## Kindling

For kindling, you should gather twigs and other thinner material that can be used to keep the fire going after the tinder was ignited. Here the options are many, and you can get

twigs thinner than the diameter of a pencil, tree bark, bird nests, and pretty much everything you can find around you.

## Sticks

These small limbs that should be larger than an inch in diameter are needed to maintain a small fire after the tinder and kindling are burned off. Dead trees offer a variety of sticks to chose from, and in some instances, it will be more than enough to keep your fire going to boil water or to cook various meals.

## Wood

To have a long-lasting fire, you will need larger pieces of wood. Any pieces around 3 to 4 inches in diameter should be enough to maintain a healthy fire for as long as you need. Now the amount of wood you gather depends on how long you want the campfire to last.

When gathering fuel, you should always get more than you think would be enough because there’s no telling what can happen or how your fire could burn all the fuel. The last thing you want is to stumble in the dark trying to find fuel for your dying campfire.

## Building the fire

Before you build your campfire, you must first make sure the place you picked for its layout is clean of debris and that there is no man-made or natural overhang structure that can get ignited, leading to a wildfire.

Once you start the fire, the tinder and kindling you gathered will burn up quickly, so you need to add additional fuel so that the fire won’t extinguish itself.

Before you ignite the tinder, have various types of materials piled near the campfire site that can be used to feed the fire once the tinder and kindling start to be consumed by the flames. Having various types of fuel grouped will help you increase the size of your fire as needed.

Even so, you must pay attention and avoid adding too much fuel at once since the fire needs to breathe, and if you don't leave space for oxygen to get into the flames, you will extinguish the blaze. To keep your campfire going, you need to figure out a certain balance between fuel, heat, and oxygen.

## Got wood?

There are various trees that one can choose as fuel for a campfire, but not all are good firewood. Here are some options you have:

- Alder – It burns quickly but doesn't provide too much heat
- Ash – Burns even when green, and it gives a great deal of flame and heat.
- Birch – It gives up many embers, and it's similar to ash in terms of flame and heat but doesn't burn well when green.
- Fir – Not ideal as firewood since it gives up little heat and also makes a small flame.
- Elder – Burns quickly, but it gives out a lot of smoke and produces very little heat
- Elm – Burns slow due to its high moisture content. Use it only if it's very dry.
- Oak – When dry, oak will burn slowly and provide good heat.
- Pine – Provides a good flame, but it often splits due to its sap content.
- Poplar – Very low heat and very smokey. Use it if nothing else is available.

- Spruce – Burns fast and produces a lot of sparks.
- Willow – A poor burning wood, even if it’s dry.

Identifying the trees to make sure you pick the correct wood is an entirely different story, and it has to do a lot with plant identification. A field guide will come in handy if you’re a novice at telling trees apart.

# Campfire types

No campfires are equal, and there are various construction designs that you can use for your campfire, based on what you need to use the fire for. You probably want to use the campfire to stay warm or to cook your meal. You probably want to use it for signaling purposes, or you want to keep it going all night to provide light and ward off animals. All these uses are achievable only if you pick a certain layout to build the campfire.

There are multiple fire lays you can employ, and each has a specific learning curve to it. Depending on your situation, you can pick one of the fire lays described in this article. These are the most popular and useful designs, and many other variations are starting from them:

1. Long fire – The long fire, also known as a long log fire, is a long-lasting fire that can be used next to a reflector (larger boulder or a wall) to keep a nearby shelter or tent warm throughout the night. You can build a long-log fire directly on the ground or in a shallow trench to keep the fire protected from the wind. Lay two long logs next to each other, leaving enough space between them to add tinder and kindle and sticks and other fuel once the fire starts. The proximity of the logs depends on how large you want the fire to be and if you also need to use it for cooking (placing the pots on the logs). Also, to make sure oxygen reaches the coals between and under the logs, make sure you place the logs

on sticks or stones when building the layout.

2. Star fire – A star fire requires you to lay the logs (each log should be of similar length) in a start shape pattern with the ends of the logs uniting where the tinder and kindling are ignited. As the fire starts to burn and the logs are ignited, you can push in the arms of the start to feed the fire. You can also place stones between each arm to ensure the coals remain in the middle as you push in or pull out the logs. This type of fire is a long-lasting one, and it helps you conserve fuel. It's ideal for cooking since it can accommodate the diameter of any of the cooking pots you have, and the fire will remain the same size for as long as you use it. The problem is that you will need to keep pushing the logs for the fire to keep burning.
3. Tepee fire – This is perhaps the most popular fire lay, and everyone builds it (instinctively, I could say) when constructing a campfire. The tinder and kindle are placed in the middle, and around it, fuel logs are aligned in an upper manner, all leaning on each other. Once the fire is ignited, the layout allows air to enter the space at the bottom and creates a natural chimney that constantly funnels the air. The fire will burn large (depending on how long the logs are), bright, hot, and quick. Depending on how much fuel you add, you will end up with a massive fire. It's easy to maintain and can also be used for signaling, especially if you toss some green foliage over it.
4. Pyramid fire – For this fire lay, you need to place large logs at the bottom of the fire and pile up smaller and smaller logs as you go up, leaving space between the logs for air to get through. This is a self-feeding fire, and as the levels start to be consumed by the flames, it will fall in on itself, adding more fuel to the fire. This is a long-lasting fire with no maintenance, and it will keep burning for hours depending on how tall you built the pyramid. If you

don’t space out the logs, the fire will burn slower, and if you make it correctly, you will have a nice pile of coals waiting for you in the morning. The problem with this type of fire layout is that you need a lot of fuel, and it takes some time to build its structure.

5. Firestick lay – You will need to place a log on two rocks (a rock at each end) and place tinder and kindle under and near the log for this type of fire. After igniting the tinder and adding the kindle, place various sized sticks on the log, with each stick leaning on the log with one end on the ground. You can space the sticks out as much as you want or place them close together to prevent the fire from burning too fast. This type of campfire will burn bright and warm but won’t last as much as other fire designs. You can use it to warm up two people fast, one on either side of the fire.
6. Log cabin fire – For this layout, you will need to build a teepee fire and build a structure around it by stacking sticks or logs in a square, crisscross pattern with enough space between the logs to promote oxygen flow. This open and aired construction allows the fire to burn violently, producing a great deal of light and heat. It will consume the fuel quickly and provide you with a proper bed of coals you can use for cooking.
7. Platform fire – A platform fire layout starts by building a platform from greenwood to raise a fire at a certain level, above snow or wet ground. Using green logs in a crisscross pattern at the base will prevent the platform from burning up and break down. On the top layer of the platform, you can also add sand or any other available material to create a barrier between the fire and the green logs, thus protecting the green logs even more from the flames. Once you have the platform built, you can use any fire layout if you have enough space.
8. V fire – This is a simple layout, a somehow modified version of the long log fire. You can create a V shape

using two logs to block the wind from reaching the tinder and coals and also use the upper part of the logs to support your cooking pans. You can point the V towards or against the wind, depending on what results you expect. Light your tinder and kindle inside the v shape and add fuel as needed, then rake the coals towards the junction and use them for your cooking needs.

You can also block the opening of the V with rocks to control how much oxygen gets to the base of the fire and how much fuel you consume to keep the fire going.

## Concluding

Building a proper campfire requires practice and figuring out that perfect balance between fuel, heat, and oxygen. For your campfire to be efficient, you can use one of the fire layouts listed in this article or improvise starting from one of these designs.

Learning how to build a fire in the wilderness is an essential survival skill, and you need to be able and pick the right fuel and use the proper fire lay to keep your campfire alive.