

FIRE BUILDING – Level 5

Preparing the Site

The campfire should be built in the center of a circle that has been cleared of all burnable materials. A small fire requires about a six-foot circle and a large council fire requires a ten or twelve-foot circle (see Figure 1). Not only should all of the burnable materials be cleared from around the fire on the ground, but from overhead as well. Never build a fire under a small tree or low overhanging branches.



Figure 1



Figure 2

Building the Fire Ring

Look around in the area where you plan to build your fire. Locate stones or rocks of any size to be used to form a ring around the space where you are going to build your fire. The size of the stone ring is going to be dependent on the size or purpose of the fire you are going to build. A cooking fire does not need to be that big and an 18” to 24” diameter fire ring will be suitable for this type of fire. If you are building a fire for heat, light and conversation you will need a larger fire ring of 36” or more in diameter. The entire fire pit needs to be ringed to prevent the fire from leaving the designated spot. Grass and leaves burn and these items are not fully removed from the area this can cause the fire to leave the pit area if it is not fully ringed.

Building a Fire

Before striking the first match, gather all of your tinder, kindling and firewood.

Tinder:

Tinder is any material that lights quickly and burns fast. Some examples of good tinder are birch and cedar bark, dry cattails, dry pine needles, dry weeds and grass, small wood shavings, news paper, paper bags and cardboard. Two large handfuls of tinder should be enough to start the fire.

Kindling:

Kindling is made up of small sticks of dry wood usually slightly larger than the twigs used for tinder. These do not catch fire as easily as tinder, but once burning, will burn hotter and longer than tinder (see Figure 2). Three or four handfuls of kindling, of various sizes, should be enough to keep your fire going until the firewood starts burning. Kindling needs to have sticks of all sizes that range from ¼ inch to 1 inch in diameter. You will need to have plenty of each size to ensure that your fire starts and stays burning. You place the smaller diameter pieces of kindling on first and move to the larger pieces. Be sure to place the pieces on the fire and do not throw them on as you can smother the fire and put it out.

Wood for Fuel:

The type of firewood needed will depend on what the fire is to be used for. When building a quick fire for heat, softwood such as pine, birch and spruce will work the best. Hardwood, such as oak, hickory, maple and ash will provide excellent coals for cooking. Whatever type of wood you choose, the wood pile should have more than enough wood to get the job done. A good estimate of the amount of wood you will need depends on many factors such as what am I going to use the fire for and how long the fire is going to burn. A rule of thumb is that for every 30 minutes the fire is going to burn you will need 6 pieces of fire wood. Using this information a cooking fire that is going to burn for two hours will need 24 pieces of fire wood. If you are building a fire for heat and conversation and plan on having it burn for 4 hours you would need 48 pieces of wood. You need to plan ahead.



Figure 3

Up-Side Down Fire

The Up-Side Down fire is just what it is called. Basically you build the fire up-side down. This type of fire does not give off a lot of heat or light, but it does burn a long time because it uses its own coals to keep the fire burning. Let's construct one of these from the bottom up. Starting at the bottom you build a layer of logs and then build a box with smaller logs on top of these. On top of the box you just built layer an entire row of kindling about 1 inch in diameter. Next layer an entire row of kindling, about ½ inch in diameter, in the opposite direction. On top of this layer place your tinder and on top of the tinder place your kindling of approximately ¼ or less in size. You will need a good 4

hand full's of this size kindling. Light the tinder and as the fire burns it will burn down through all the layers.

Lighting a Fire Without Matches

The skill of lighting a fire without the usage of matches or a lighter is an essential part of being able to take care of yourself. There are many ways you can accomplish this. In early civilization rubbing two sticks together would cause heat to build up and eventually produce smoke and flames. This is a very long process but it can be done today.

Another method is to tie a string or rope to a stick with enough slack so that the string can be wrapped around another stick with this second stick held vertically. The stick you wrap the string around should have a pointed end. The pointed end of this stick should sit snugly in a larger dry log. The step up is such that moving the stick with the string on it back and forth causes the other stick to spin. The spinning creates heat at the point when it is resting in the log. Placing tinder on the log and around the stick while the stick spins transfers the heat to the tinder and eventually this starts to burn. The spinning stick needs to be supported at both ends with wood as two surfaces rubbing together creates heat through friction.

Today we have products that produce sparks that when these sparks are captured on tinder it will cause the tinder to burn. These products are flint based products and come with the flint and the striker. These products like anything mentioned above need to be practiced with before you need to use them.