

TOP DOWN BURN

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The greatest volume of smoke and particulate pollution from a wood fire occurs during a cold start. Wood fires lit from the bottom in a conventional manner promote a dirty burn and waste a large amount of potential heat in the form of unburned gases.

A clean and efficient method for kindling a fire is a top down burn. This almost forgotten ancient European technique places the largest wood at the bottom and the wood pieces criss cross in a crib fashion and get smaller as each tier is laid. Kindling and a small amount of paper is placed on top and then lit at the top.

When the top down burn fire is lit, the flames are always above the fuel load. The smoke and flammable gas from each tier of wood will always travel up through the flame and burn, thereby reducing particulate pollution and unburned fuel.

Top kindling a fire also produces large and less compacted bed of glowing coals, providing excellent long lasting radiant heat.

A top down burn fire laid with seasoned hardwood to a height of eighteen to twenty four inches will burn for about four hours in a fireplace without adding any more wood. The fire will be mesmerizing to watch as each tier slowly ignites and burns its way down.

Top Down Burn Recipe

- Always start with dry well-seasoned split firewood and kindling.
- Bottom layer: Three good sized pieces of split hardwood (if available) five to six inches thick laid front to back.
- Second layer: Three slightly smaller pieces of split firewood three to five inches thick laid side to side.



Drawing by José Valverde,
courtesy Sleepy Hollow Chimney Supply

The most common mistake in building a top burn fire in a fireplace is not graduating to fine enough kindling. The best ignition material for the topmost layer is cedar shavings, but a bit of newspaper will do.

- Third layer: Four to five smaller pieces of split firewood two to three inches thick laid front to back.
- Keep alternating and decreasing in size with split firewood until they are about one inch thick.
- Now alternate two or three rows with split softwood (pine, spruce, etc. if available) until pencil thick.
- Place a small piece of newspaper on top and ignite.

Woodstoves

The firebox of a modern, certified clean burning woodstove is too small to accommodate the complete fire building recipe described. But starting a fire with a scaled down version of this technique with a couple of larger pieces of firewood at the bottom enables the fire and chimney draft to become well established before any more fuel is required. By reducing the number of times fuel is loaded into the stove, the door is opened fewer times and smoke spillage into the room may be reduced.