THAMES REGION ECOLOGICAL ASSOCIATION

Ontario Trillium Foundation
Fondation Trillium de l'Ontario

Fireplace options
with Shane ONeill

How to be energy efficient with your fireplace given the fact that greenhouse gas emissions are a concern? Shane ONeill discusses this question. Please read on to learn how to make your fireplace both safer and more enjoyable.

A fireplace provides comforting warmth in the winter and eye-catching display space all year long, but environmental awareness is still of key importance. Wood burning is perceived by many as being natural and thus environmentally benign, but it is in fact a significant source of several harmful air pollutants, including fine particulate matter (PM2.5), black carbon (soot), dioxins, polycyclic aromatic hydrocarbons (PAHs) and volatile organic compounds (VOCs).

Gas fireplaces are noted for their clean-burning characteristics. Compared with wood fireplaces, natural gas and propane fireplaces produce much less carbon monoxide and particulate emissions. However, no energy source is completely environmentally friendly. Natural gas and propane do release some pollutants when burned, primarily nitrogen oxides (which contribute to smog) and carbon dioxide (a greenhouse gas). They also release significant amounts of moisture into the air. A poorly adjusted gas fireplace can generate incomplete combustion products, including carbon monoxide. It is important to keep in mind that buying an energy-efficient gas fireplace and using it wisely will use less energy and reduce greenhouse gas emissions that contribute to climate change.

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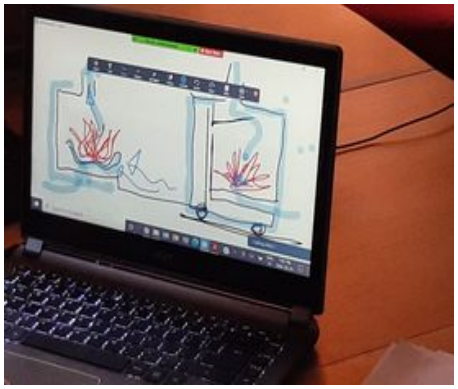

Fireplaces can be found at the center of the house or on the external side. The firebox is the box where the fire is built and burned. It consists of three walls and a floor constructed of firebrick and refractory mortar. A firebox or firepit is the part of the fireplace where fuel is combusted, in distinction from the hearth, chimney, mantel, overdoor, and flue elements of the total fireplace system. The firebox normally sits on a masonry base at the floor level of the room. The firebox takes the brunt of the fire's heat and it requires some special attention.

How can you help save the environment, save money and still heat your home completely all winter long? Wood burning stoves use a replenishable and inexpensive fuel that is extremely efficient especially when modern appliances are used. Wood burning stoves may seem old-fashioned, but the rustic, old-fashioned look and feel come with modern efficiency and capabilities these days.

Here some tips on how to Reduce Heat Loss from the Fireplace:

- Keep your fireplace damper closed unless a fire is burning.
- When you use the fireplace, reduce heat loss by opening dampers in the bottom of the firebox (if provided) or open the nearest window slightly.
- If you never use your fireplace, plug and seal the chimney flue.
- If you do use the fireplace, install tempered glass doors and a heat-air exchange system that blows warmed air back into the room.
- Check the seal on the fireplace flue damper and make it as snug as possible.

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