

Stop the Heat Robbers

Does the thought of another winter's high heating bills have you feeling glum? Well, don't just sit there--do something about it! Take action against the heat robbers!

What are the heat robbers? They are any features of your house that let cold air in or heated air out. They include intentional openings like doors and windows and a multitude of unintentional ones.

How important are these energy leaks? Altogether, the little openings that exchange warm air for cold can add up to a hole the size of a basketball in the side of your house. They're a big part of the reason why you may be wasting at least half of the fuel you buy to heat your home.

The heat robbers do their dirty work through two basic principles: conduction and infiltration.

Conduction is the transfer of heat through a substance or material. Some materials conduct heat much more rapidly than others. Aluminum, for instance, is a better heat conductor

than wood. That's why a wooden storm window is somewhat more effective at cutting heat loss than an aluminum one. What makes any storm window effective, however, is not the panes of glass or the materials holding them but the air trapped between the panes. Air is a poor conductor of heat, so a layer of air between the panes slows the loss of heat through the window.

If the window has gaps around it, however, heat will be lost through infiltration as the colder, denser, heavier outside air moves in to take the place of the warm air that's moving up toward the ceiling.

Finding and stopping these energy leaks doesn't take any special skills or cost very much money. It does take time. But, for the hours and the few dollars you invest, you can reap sizeable rewards in fuel savings.

Use the checklist to ferret out the heat robbers in your house.

WINDOWS

How many windows have storm windows or more than one layer of glass?

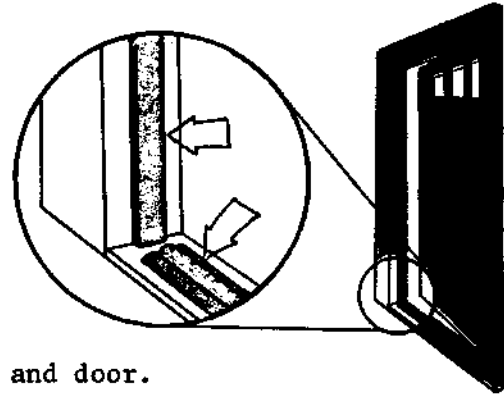
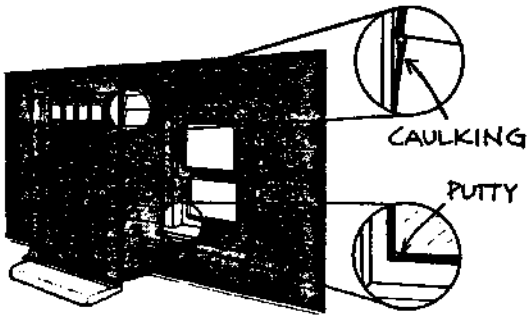
___ all have storms ___ how many need storms?

How many windows have weatherstripping?

___ all ___ how many need weatherstripping?

Action recommended:

YES	NO		YES	NO	
___	___	Repair broken window (s)	___	___	Install weatherstripping
___	___	Close curtains and shades at night	___	___	Replace putty
___	___	Install insulating shades, panels, cornices	___	___	Install storm windows (plastic, plexiglass, glass)
___	___	Caulk around windows			



Look at a typical window and door.
Check for places that need caulking
or putty.

DOORS

How many outside doors have storm doors?

all how many need storm doors?

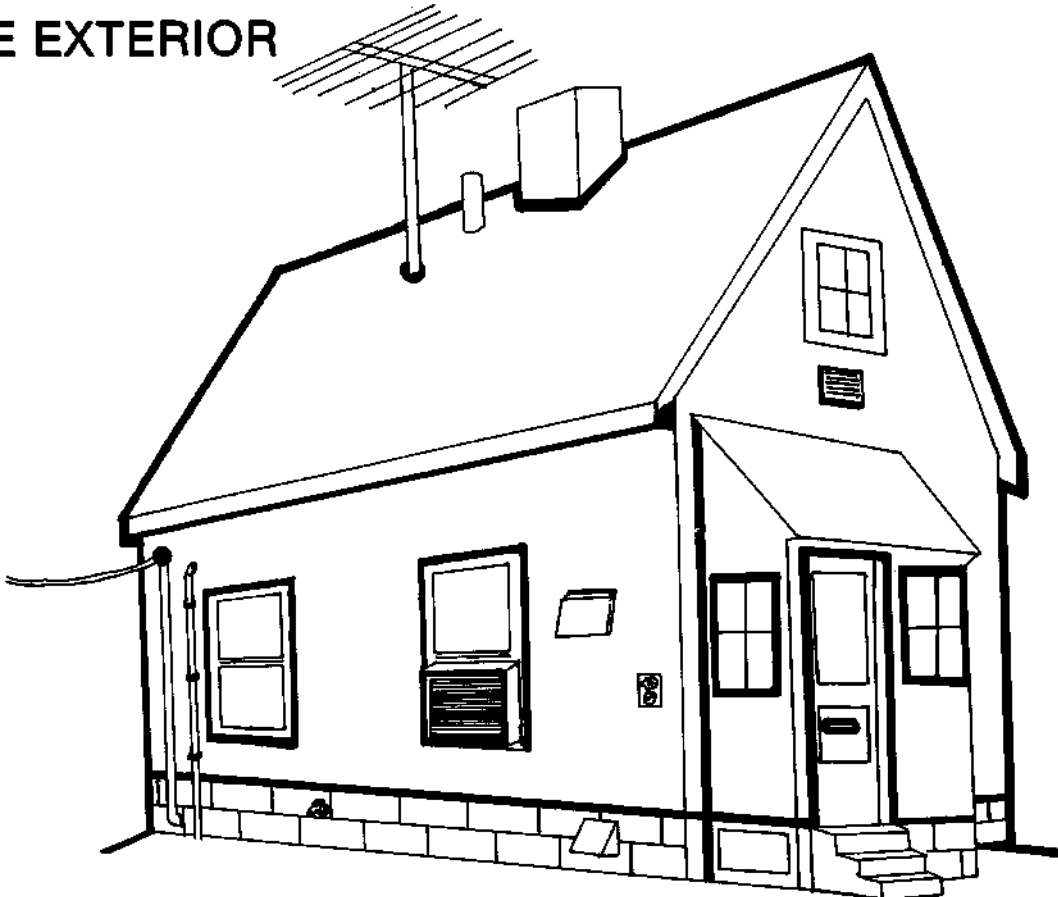
How many outside doors have weatherstripping?

all how many need weatherstripping?

Action recommended:

YES	NO		YES	NO	
<input type="checkbox"/>	<input type="checkbox"/>	Weatherstrip	<input type="checkbox"/>	<input type="checkbox"/>	Designate only one door for general use
<input type="checkbox"/>	<input type="checkbox"/>	Add storm door (s)	<input type="checkbox"/>	<input type="checkbox"/>	Insulate door to attic or other unheated area (garage, etc.)
<input type="checkbox"/>	<input type="checkbox"/>	Replace threshold			

HOUSE EXTERIOR

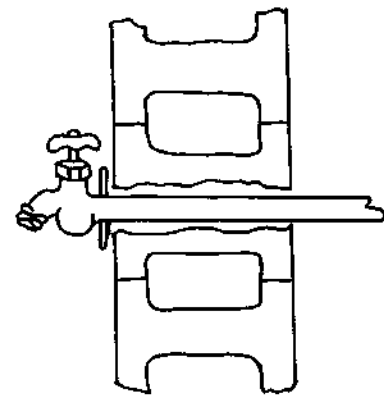


How many openings can you find in the roof, walls or foundation of your home?
(Hint: look for gaps wherever anything goes through the roof or through a wall or floor dividing heated and unheated areas, and wherever two surfaces or two different materials come together.)

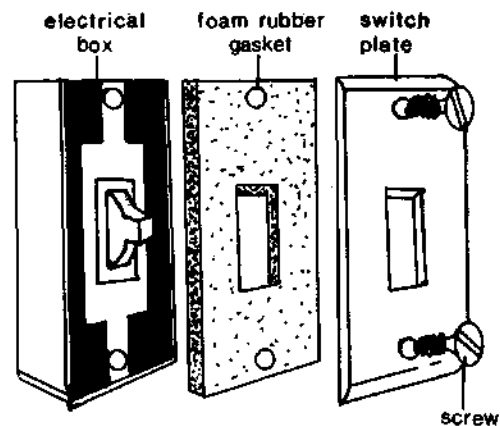
Action recommended:

YES NO

- Seal all cracks and seams:
around the chimney
between the sill plate and the top of the foundation
in the foundation
around the mail chute
around plumbing vents
around kitchen and bathroom exhaust fans
around outdoor faucets and electrical outlets
around porchlights
around dryer vent
around room air conditioners (cover units tightly, too)
- Adjust any automatically closing vents that don't close tightly. Check the spots where various utilities enter your home and set up openings around:
the heavy cable by the fuse box
the TV antenna wire or cable
the telephone wire
- Clean and/or adjust fireplace dampers so they close tightly when fireplace is not in use. If damper is missing or won't close, make or buy a fireproof cover for the fireplace opening or the flue.



Caulk outdoor faucets



Another place to look is indoors - the electrical outlets and switch plates on exterior walls. Foam inserts are easy to install and help plug the infiltration through the metal box.

CUT OFF

Want More Information?

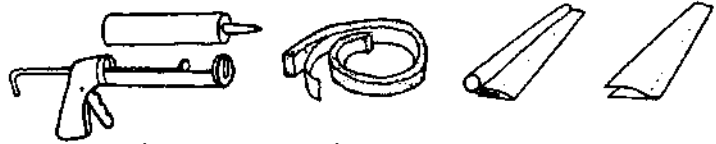
Single copies of the Extension publications listed below are free from:

MSU Bulletin Office
P. O. Box 231
East Lansing, MI 48824

Be sure your address is correct on the back of this coupon

- ___ E-1103 Insulate Your Unfinished Attic
___ E-1104 Weatherstrip Your Doors and Windows
___ E-1105 Insulate Your Basement Walls
___ E-813 Weatherproofing Michigan Houses
___ E-1193 Where Houses Lose Heat

Caulking Materials



Most caulking materials are packaged in tubes so they can be applied with a caulking gun. The caulking gun costs only a few dollars. Caulking compounds vary greatly in price. Generally, the most expensive are the longest lasting.

Silicone compounds applied outside according to the manufacturer's directions should last about 30 years. Acrylic-latex, butyl rubber and synthetic compounds, which may be purchased in various colors to blend into your home's exterior color scheme, have a useful life expectancy of 8 to 10 years. The cheaper oil-based compounds and asphalt can be expected to last 3 to 5 years.

Weatherstripping Materials

Self-adhesive foam tape is made of high-grade, resilient sponge rubber or vinyl with a paper or vinyl backing. It comes in various thicknesses up to 3/8 inch. To apply peel off the backing and press the sticky side of

the tape on the door or window jamb, stop or sash. Surfaces must be clean and dry. This material is cheap and easy to apply, but it tends to deteriorate rapidly if exposed to weather. It may last only one season.

Felt weatherstripping comes in various widths and thicknesses. Fasten it to wood with tacks or staples and to metal with a good adhesive. Apply it to door stop, sill or sash so it fits snugly against the other member. Felt is easy to apply but it tears easily during use and it's not effective when wet.

Neoprene-coated sponge rubber or foam, with attached neoprene strip for fastening to bottom of door or door jamb, is easy to install and holds very well when tacked or stapled. It can also be used on windows.

Metal-backed vinyl strips are easily applied to wood door and window jambs, stops or sashes with tacks or screws.

Irene Hathaway
Irene Hathaway
Extension Specialist
Family Resource Management

Joanne Keith
Joanne Keith
Assistant Professor
Family & Child Ecology

Leslie Mack
Leslie Mack
Extension Specialist
Agricultural Engineering



1P-5M-11:80-MP. Price 10 cents. Single copy free to Michigan residents.



COOPERATIVE EXTENSION SERVICE
UNITED STATES DEPARTMENT OF AGRICULTURE
MICHIGAN STATE UNIVERSITY
EAST LANSING, MICHIGAN 48824

AN EQUAL OPPORTUNITY EMPLOYER

POSTAGE
AND FEES PAID
U.S. DEPARTMENT
OF AGRICULTURE
Agr 101



OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE. \$300