BASIC HOME MAINTENANCE

FIRST NATIONS HOME OCCUPANTS' GUIDE

Canada

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HOME TO CANADIANS

Why Home Maintenance?

When it comes to home maintenance
an ounce of prevention
is often worth a pound of cure.

Benefits to Regular Home Maintenance Include:

- ✓ Saving money
- ✓ Making homes healthier
- ✓ Making living environments more enjoyable for home occupants

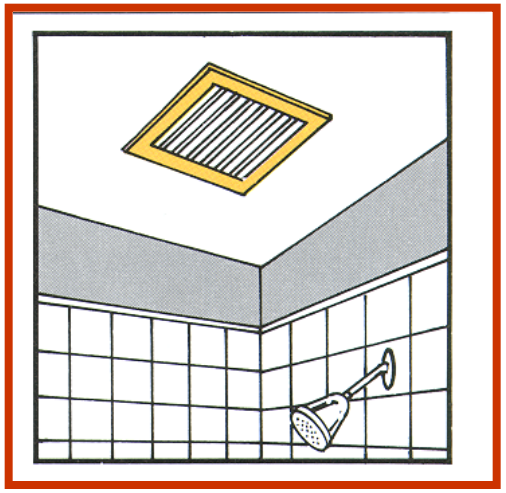
What is Home Maintenance?

- **Preventative maintenance is the act of heading off problems before they occur.**

- **Helps to prolong the lifespan of housing components**

Examples of Preventative Maintenance

- Regular cleaning of bathroom fans
- Replacing bathroom caulking



Examples of General Maintenance

- Fixing leaky faucets
- Changing furnace filters

Who's Responsibility Is It?

	Occupant	First Nation	Both
Foundation		X	
HRV's			X
Kitchen and Bathroom Fans	X		
Furnace Filter	X		
Smoke Alarms	X		
Appliances	X		
Roofs		X	
Windows and Doors			X
Plumbing			X

How to do a Home Maintenance Needs Assessment

- Check list to guide you through a yearly maintenance walk through of your home

- Identify potential problems and maintenance needs

Inspecting Crawl Spaces

Inspect Twice Per Year and After Heavy Rains

- ✓ Look for signs of moisture and flooding
- ✓ Inspect for rodent or other animal signs such as droppings
- ✓ Check that insulation has not become dislodged or fallen
- ✓ Make sure heater are on NOTE: NO VENTS.

Crawl Spaces

Conditioned Crawl Spaces

- Heated
- Crawl space walls are insulated
- NO VENTS

Unconditioned Crawl Spaces

- Unheated
- Floor system over crawl space is insulated
- Freeze protection for plumbing
- Fixed-open or closeable vents

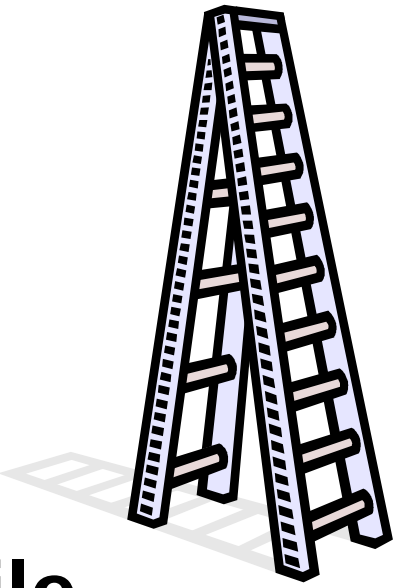
Do not store any object in the crawl space area that attracts moisture.

Safety

Safety is very important!

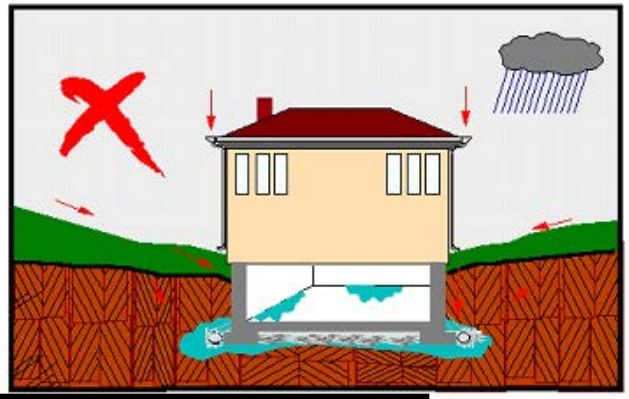
- Do not attempt any home maintenance activity without the proper tools, materials and safety equipment
- Follow manufacturers' specifications when using their products
- Do not attempt work that is beyond your abilities
- Be aware of safety hazards

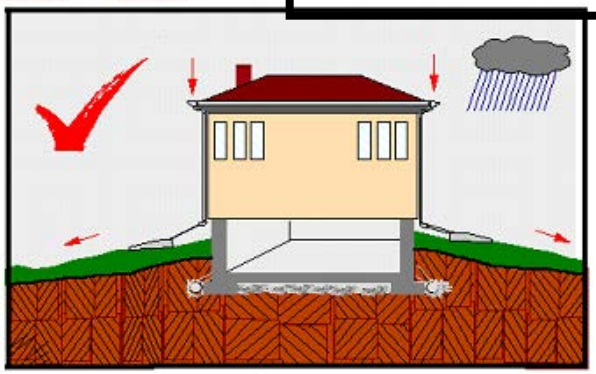
Ladder Safety



- ✓ Inspect the condition of the ladder
- ✓ Never stand on the top step
- ✓ Have someone hold the ladder while you climb
- ✓ Never lean too far away from the ladder

Grading and Drainage





Moisture can lead to premature deterioration of building materials and mold growth.

Sealing Siding Penetrations

- Use caulking that is rated for exterior use
- Clean and dry surfaces before caulking
- Don’t apply caulking when the weather is cold or wet

Repairing Vinyl Siding

Basic Home Maintenance

Replace damaged vinyl siding pieces.

INSPECT SIDING FOR:

- ✓ **Wind damage (missing pieces)**
- ✓ **Loose seams**
- ✓ **Holes**
- ✓ **Cracks**

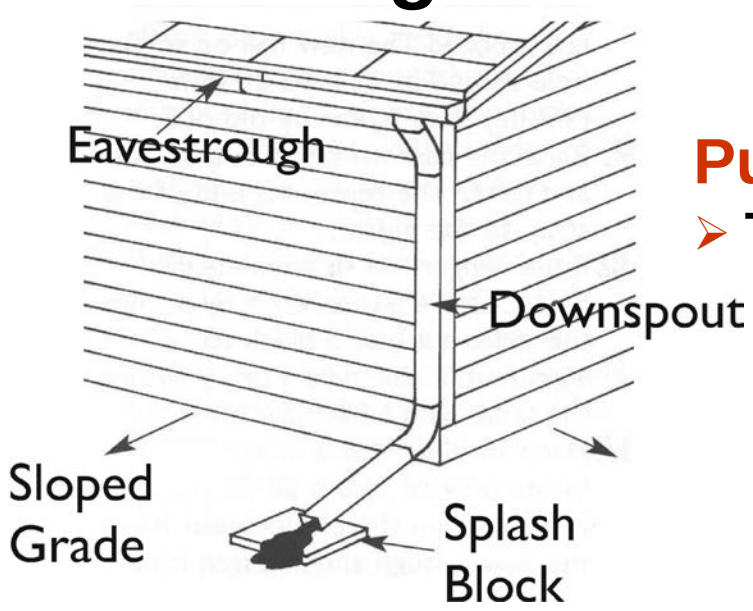
Caution:

Power washers can damage siding and force water into wall cavities.

Power washing may void the siding warranty.

Eavestroughs and Downspouts

Basic Home Maintenance



Purpose of Eavestroughs (gutters)

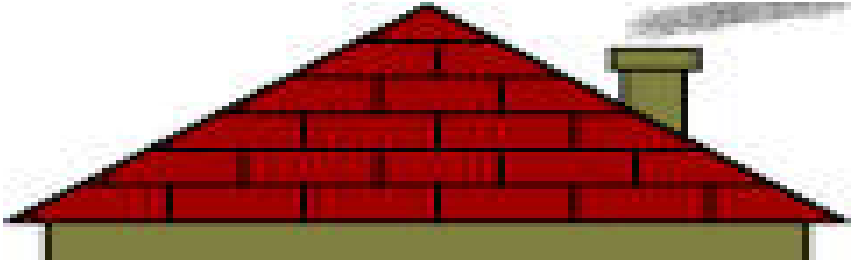
- To carry rainwater away from the house

- ✓ Continuous gutters are best
- ✓ Downspout extensions and or splash-pads help direct water away from the building.
- ✓ Clean gutters at least once a year
- ✓ Ensure downspouts are properly attached

Roofing Repairs

A Leaking Roof Will:

- Cause insulation damage
- Cause drywall damage
- Eventually cause rot
- Contribute to mold growth



Inspect Roofing For:

- Wind damage (missing shingles)
- Loose and damaged shingles
- Curled shingles
- Damaged or missing flashing

- **Loose shingles need tabbing down**
- **Damaged shingles should be replaced.**

Main Shut Offs

Know Where Your Main Shut-Offs are and How to Operate them

- In case of an emergency
- In case of appliance malfunction
- For performing certain types of maintenance

Categories of Shut-Offs Include:

- Electrical
- Gas/Oil/Propane
- Plumbing

Main Shut Offs

Electrical

- Houses have electrical distribution (breaker) panels near where the outside power source enters the house
- Most panels have a main breaker
- Each circuit has its own breaker

Electrical repairs must be done by qualified electricians

Main Shut Offs

Gas / Propane

- A main shut-off will be located at the gas meter or propane tank
- Each appliance will have a shut-off
- Do not tamper with or turn off these shut-offs
- If you smell gas, do not light an appliance. Get everyone out of the house and use a neighbour's phone to call the gas company or fire department.

Main Shut Offs

Water

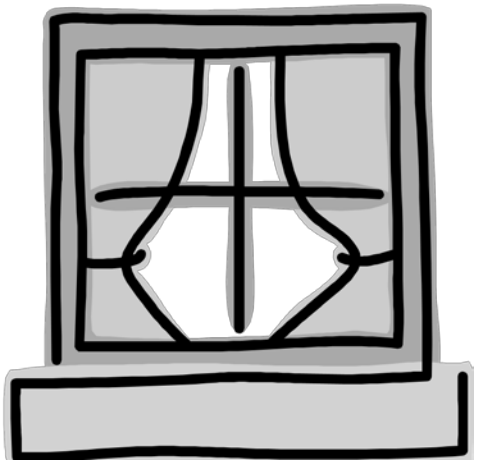
Each house has a main water shut-off

The water heater will have a shut-off

Each plumbing fixture should also have a shut-off

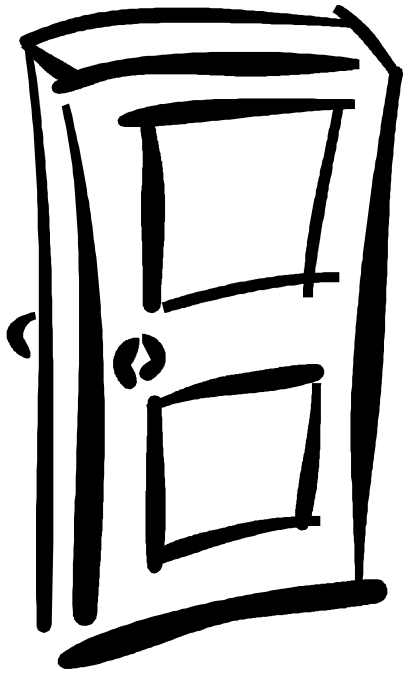
Windows

- Check weatherstripping around windows Yearly.
- Check alignment of windows and patio doors
- Ensure windows operate properly



A poorly sealed area can contribute to heat loss resulting in higher heating bills

Doors



Door Maintenance Includes:

- ✓ Replacing weatherstripping
- ✓ Tightening screws
- ✓ Lubricating hinges

Door Weatherstripping

Purpose:

- ✓ Saves money by reducing heat costs
- ✓ Helps provide occupant comfort
- ✓ May help stop wind driven rain from entering home

Repairing Walls and Ceilings

Various types of patching materials are available for patching drywall

Check for wires and pipes before cutting into walls

Painting

Health and Painting

- ✓ **Always use no or low VOC paint to minimize emissions and off-gassing**
- ✓ **Avoid use of oil-based paint due to off-gassing**
- ✓ **Paint provides hygienic washable surfaces**

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Painting

Moldy Surfaces and Painting

- ✓ Never paint over mold
- ✓ Correct situation causing mold
- ✓ Clean up mold, prime or seal surface and then paint

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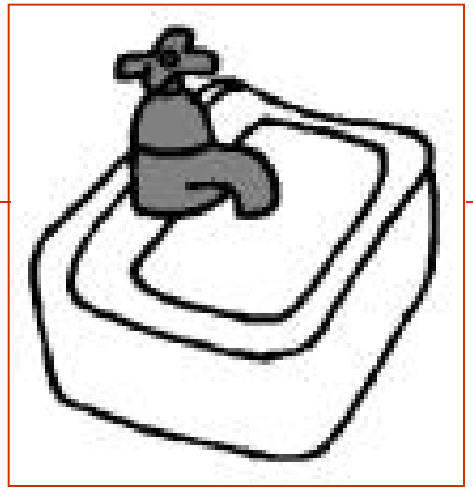
Cleaning Sinks, Tubs and Shower Stalls

- Clean regularly for health reasons
- Using the wrong cleaning products can damage finishes
- Many tubs and showers require yearly waxing



Replacing Caulking Bathrooms and Kitchens

Importance of Caulking

- Protects walls and sub-floor
- Moisture in drywall and wall cavities may cause mold to grow
- Moisture on plywoood sub-floor may cause mold, rot and flooring damage
- A few dollars spent on replacing caulking **before** it fails can save thousands of dollars

When Choosing Caulking, it Should be:

- ✓ A bath and kitchen caulking
- ✓ Silicone type
- ✓ Rated as mildew resistant

Caulking is Available in:

- ✓ Gun-type tubes
- ✓ Squeeze-type tubes
- ✓ Various colours as well as clear

Waste Plumbing

Causes and Effects of Leaks

- Drain pipes expand and contract with exposure to hot and cold water
- Can cause compression type joints to loosen
- Leaks will elevate moisture levels and contribute to mold growth

Leaking Traps

- Traps are designed to prevent sewer gas from entering the home
- Hand tighten to stop leaks
- If leak persists, take connection apart, clean and install a new washer
  Do Not Over Tighten

Repairing Faucets

Common Problems:

- Dripping
- Leakage around handles and spouts
- Loose mounting connection to sink

Faucet types:

- Seat & washer (compression) type
- Diaphragm type
- Ceramic and ball types

Repairing Faucets

Seat & Washer Faucets

- Most problems are caused by worn washers, O-rings or damaged seats
- Washers become hard after years of service and seats can become pitted -these cause dripping
- Worn or damaged O-rings cause leaks around handles and spouts

Repairing Toilets

Anatomy of a Toilet

- The handle lifts the flush valve (flapper)
- Water rushes from the tank into the bowl
- Water in the bowl creates a siphoning action which empties the bowl
- The flapper shuts allowing the bowl and tank to refill

Repairing Toilets

Common Problems

- Handle or chain breaks
- Tank continuously trickles
- Bowl flushes very slowly or overflows
- Tank or bowl leaks

Water Heaters

Under normal conditions, with little or no maintenance, a water heater usually lasts around **12 years**.

Proper maintenance can double the lifespan.

Water Heaters

Sediment and Rust

The two main causes of water heater failure are sediment and rust

Water Heater Maintenance Consists of

Flushing tank and pressure relief valve every 1-3 years

Replacing anode after 4-6 years

Flushing a Water Heater

Turn off power, leave water supply on

Connect a hose to the drain and the other end of the hose Outside or in a floor drain or sink
Careful, water will be HOT

Open water heater drain a few turns to allow water to flow freely

When water runs clean, close drain and turn power back on

Maintaining Septic Systems

A septic system is a sewage treatment plant that usually services just one home

Purifies wastewater so it is safe to re-enter the ground water system

It contains a tank and a distribution network of pipes called a tile bed, leaching bed or field

Septic Tank

Purpose:
To separate solids from liquids and begin the process of breaking down the solids

The tank has 2 chambers

Heavier materials settle to the bottom to form sludge,
Lighter materials float to form scum

Septic Field

Further treats the wastewater

Distributes treated wastewater into the ground system

A series of perforated pipes allow the effluent to enter the soil

Care and Maintenance

Tanks should be pumped out every 2-5 years

Do not poison micro-organisms within the system by allowing:

- **Bleach**
- **Strong laundry detergents**
- **Solvents**
- **Harsh cleaners**

Fields should have a good grass cover, no trees, plenty of Sunlight. No driving over, parking on or storing things on

Recognizing septic problems

- Soggy or spongy ground near the field
- Plumbing backups or slow drainage
- Sewage odours from the field area (especially after a rain fall)
- Grey or black water pooling near field.

Healthy Housing

Poor Indoor Air Quality is Linked to:

- Allergies
- Weakened immune system
- Asthma and other respiratory ailments

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Your Home's Air Quality can Seriously Impact your Health

- The air inside our homes can be as fresh as the air outside
- The answer lies in making wise choices and how we operate our homes.

3 Key Elements to Making Homes Healthier

Eliminate unhealthy materials

Separate unhealthy materials from your living space

Ventilate to remove what can't be eliminated or separated

Eliminate

- Avoid using products with high levels of VOC's
- Use safe non-toxic materials for cleaning
- Have combustion appliances serviced regularly
- Reduce humidity sources by fixing leaks and not drying clothes by hanging indoors
- Avoid using pesticides, herbicides and chemical fertilizers near the home

Separate

- Seal insulation behind plastic or drywall
- If formaldehyde material is used, seal raw edges and surfaces
- Do not store toxic cleaners, garden chemicals or fuel indoors
- Protect against soil gases in areas subject to radon

Ventilate

- Ventilation will help remove chemicals and moisture from indoor air
- Exchange indoor air with outdoor air every three hours use windows and fans
- Move air around within the home to eliminate polluted dead air pockets
- Install automatic controls for exhaust fans-timers and de-humidistat switches

Humidity

Activity	# of litres per week
Normal respiration and skin evaporation from occupants	38.0 litres per week
Clothes washing	1.8 litres per week
Clothes drying indoors or use of un-vented dryer	10.0 litres per week
Cooking 3 meals daily	6.3 litres per week
Dishwashing 3 times daily	3.2 litres per week
Bathing (0.2 litres per shower) (0.05 litres per bath)	2.4 litres per week
Floor mopping 9.3 m^2	1.3 litres per week

Ventilation

Natural Ventilation

- Air exhausted through open windows.
- Air leakage from cracks and gaps.
- Air exchange from opening and closing doors
- Air exchange up chimneys

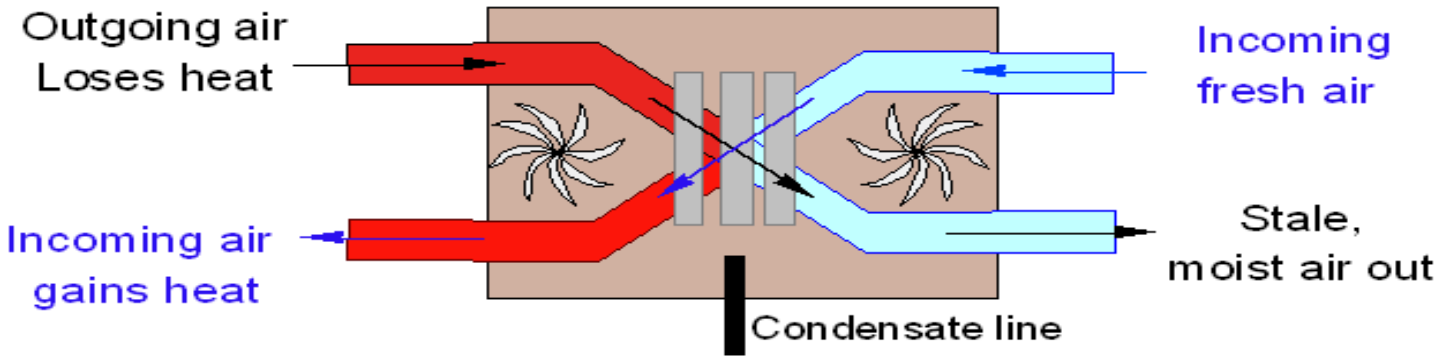
Ventilation

Mechanical Ventilation

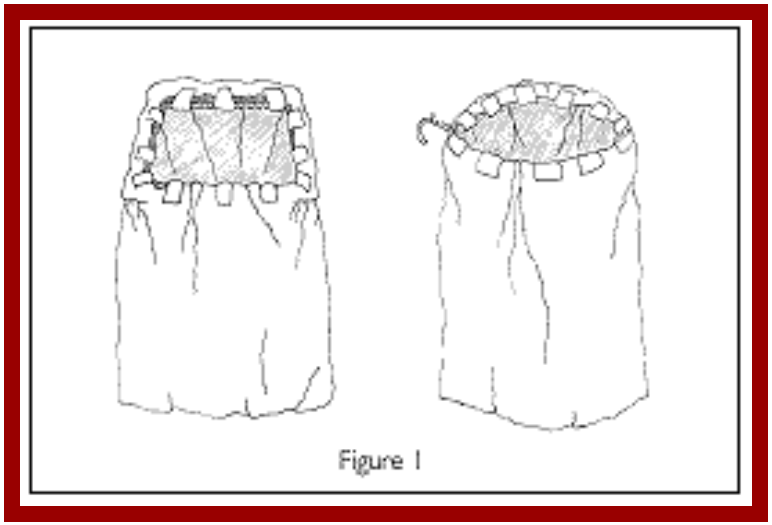
- HRV's
- Fans (Bathroom and Kitchen)

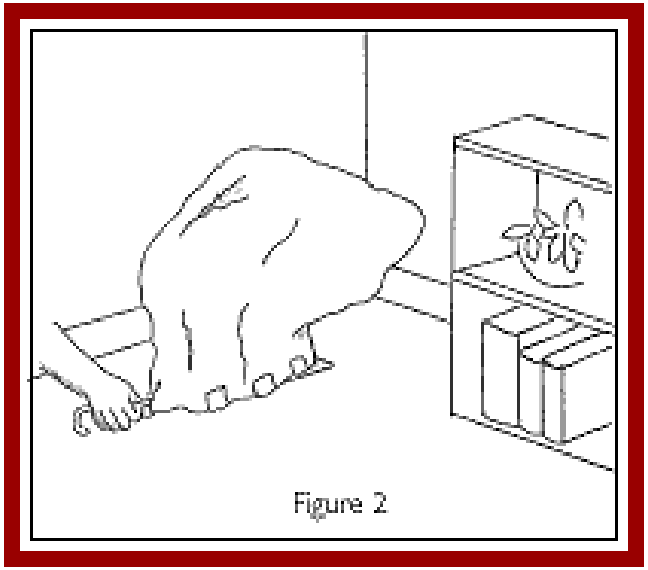
Fan Ratings

- Air flow
- Noise



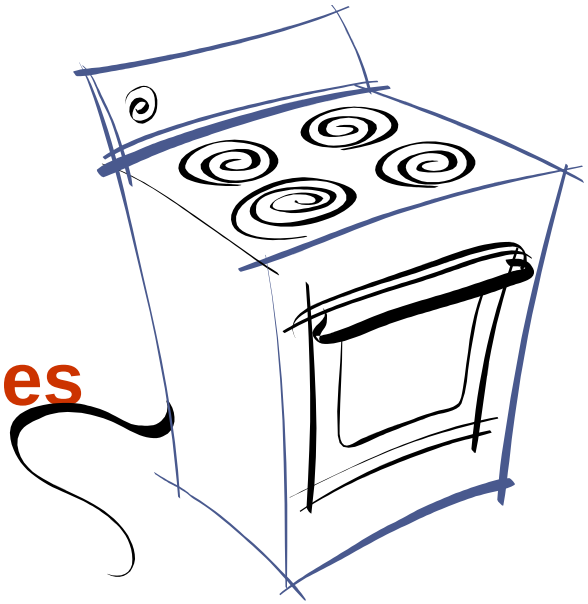
The Garbage Bag Airflow Test





Appliance Maintenance

Preventive Maintenance



Helps extend the life of appliances

Reduces down time

Helps prevent costly repair bills

Washing Machines

- Fabric softeners can gum up washer – always dilute first
- Avoid over loading washer
- Clean all four hose screens (strainers) yearly

Dryer

- Clean filter after every load
- Check door gasket condition
- replace flexible ducting with smooth metal ducting
- Keep ducting runs as short and straight as possible
- Check/clean outdoor ducting hood
- Unplug, remove back of dryer and vacuum lint from heater box area

Refrigerator

- Maintain air space on top, behind and both sides of fridge
- Make sure fridge is level or slightly tilted back, so door closes completely
- Do not push on or block the fan grille in the freezer

Once a Month

- Keep door gasket soft and pliable – clean with:
  1tsp of baking soda dissolved in
  1 litre of warm water

Twice a Year

- Clean condenser coils with a vacuum or condenser coil brush
- Check door gaskets for sealing
- Insert a piece of paper and pull gently

Once a Year

- Slide fridge from wall and vacuum around and beneath
- Wash condensation drain pan

Stove

- Keep top and oven clean to protect finishes
- Built up grease can become a fire hazard
- Inspect door gasket

Fire Safety

Basic Home Maintenance

Common Fire Causes

- Carelessness
- Untidiness

Are the most frequent cause

- Cigarette smoking
- Electrical wiring
- Appliances
- Candles

Are many of the combustion sources

Keeping Your Family Safe

- Install and maintain smoke alarms
- Keep fire extinguishers handy and charged
- Have a family fire escape plan
- Make your home a no-smoking zone
- Check that appliances are turned off before leaving or sleeping

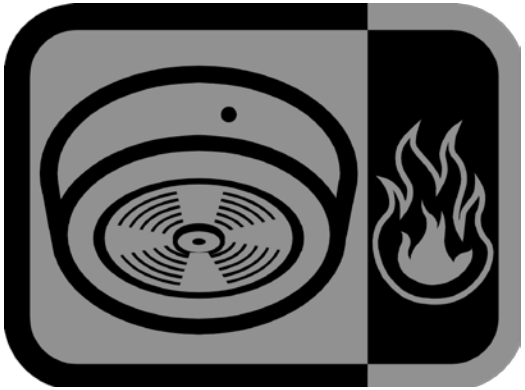
Fire Safety Plan

- Plan escape routes and have a meeting place
- Perform practice fire drills
- Keep Pathways clear
- Make sure windows open easily
- Place a smoke alarm on every floor level
- Post easy to see house numbers

Smoke Alarms

Features Now Available:

- Hardwired
- Battery operated (Replace Battery Twice Per Year)
- Hardwired with battery back up
- Test button
- False alarm silencing button
- Escape light



Smoke Alarm Placement

Placed in the wrong locations, the alarm will give false alarms and/or fail to give an alarm when needed

- Place on all floor levels where people sleep
- Place where people can hear the alarm loudly enough to wake up
- Locate alarms near ceilings (smoke rises)
- Place in hallways near bedrooms

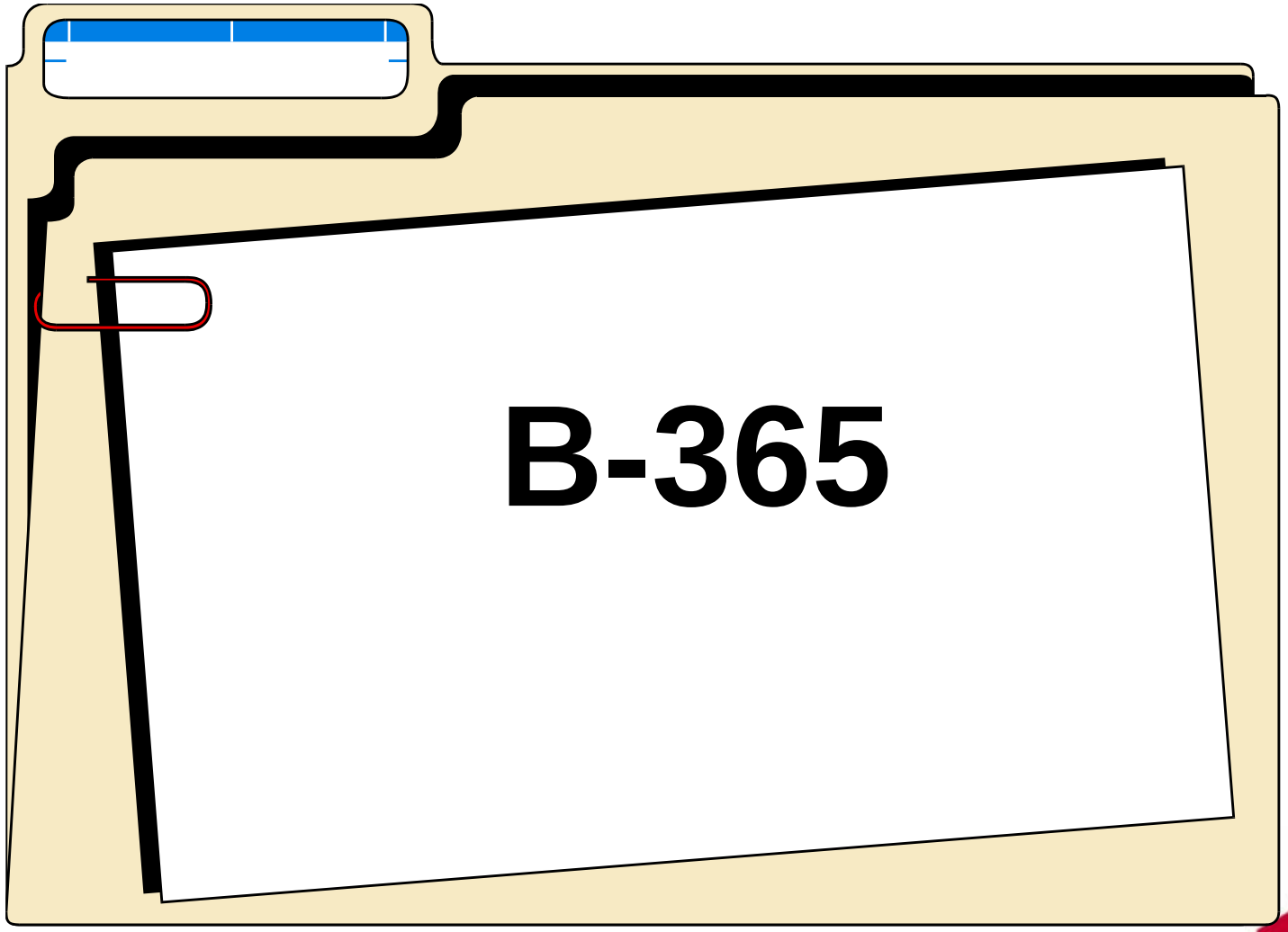
Where Not to Place a Smoke Alarm

- Near wood, gas or oil combustion appliances
- Damp or very humid areas
- Very dusty or dirty areas
- Near fresh air vents or drafty areas
- In dead air space (behind furniture, corners)
- Insect infested areas
- Within 30cm of florescent light
- Near a ceiling fan
- In a garage or unheated area

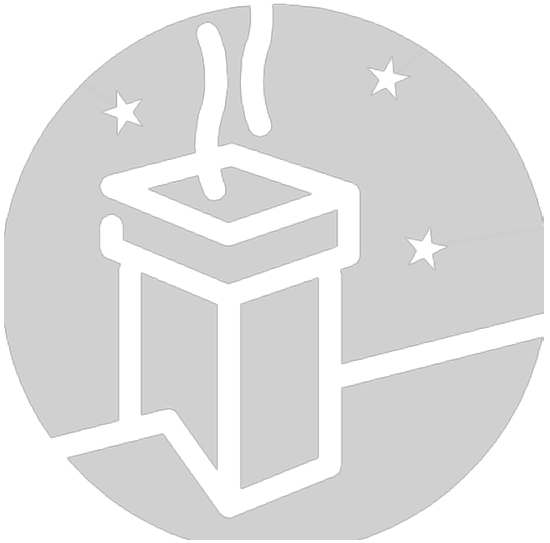
Vacuum dust from alarms once a year

Replace alarms that are **10 Years Old**

Wood Heat and Chimneys



Wood Heat and Chimneys



Requirements:

- ✓ High level of maintenance
- ✓ Carbon monoxide alarm

Concerns:

- ✓ Responsible for many house fires
- ✓ Negatively impacts heart, asthma and other bronchial conditions

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Wood Heat and Chimneys

Heater Maintenance:

- ✓ Clean ashes out of stove when 5cm deep
- ✓ Check condition of the firebricks

Chimney Cleaning:

- ✓ Clean at least once per year
- ✓ Inspect the interior of chimney by lowering a light
- ✓ Remove soot at base of chimney through cleanout doors

Chimney Exterior:

- ✓ Inspect exterior of chimney for cracks, loose mortar and creosote staining
- ✓ The exterior concrete block of the chimney should be sealed against moisture penetration

Forced Air Furnace

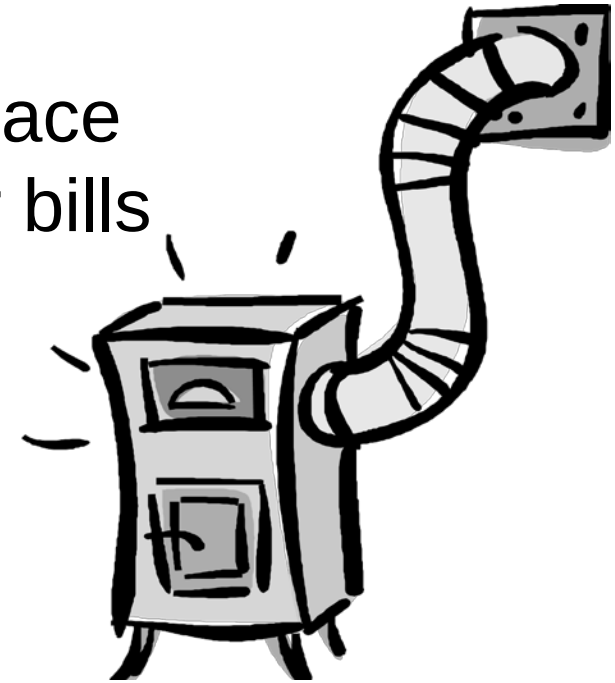
A whole house heating system that circulates a through both supply and a return ductwork system.

TYPES:

- Electric
- Oil
- Natural gas & propane
- Wood & coal

Advantages of proper maintenance

- Improves indoor air quality
- Extends the lifespan of the furnace
- Helps prevent expensive repair bills



Monthly Maintenance Activities

Replace filters (insert with arrow facing the air flow)

- Premium pleated filters are recommended
- Washable filters are available
- HEPA and electrostatic filters are available

Vacuum under registers (grilles)

Look for oil leaks (oil furnaces only)