



# Fire Safety Guide

## Fire Safety in Manitoba Educational Facilities

Developed in Collaboration with Pembina Trails and Seine River School Divisions



Updated 2018



MSBA Risk Management, together with Pembina Trails School Division and Seine River School Division, are proud to have developed a guideline that will allow all Manitoba schools to establish and maintain a standard in order to achieve compliance with the requirements of the Manitoba Fire Code and Regulations on a consistent basis. This document will assist in preparing and implementing school fire safety plans as well as a quick reference for staff.

As schools present unique fire and life safety risks, preventing fires requires emergency planning, educating teachers and students on what to do in case of a fire, and ensuring the school building is kept fire-safe. The requirements in these areas are contained in the National Fire Code of Canada, which has been adopted in Manitoba.

This guideline contains elements for the development of a fire safety plan for your school(s), and should be reviewed yearly.

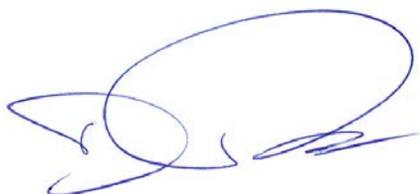
Schools are legally responsible for ensuring that adequate systems are in place and that checks are carried out to reduce the risk of fires. Effective fire safety risk management in educational establishments will include:

- ensuring that all members of staff are given adequate training and information;
- fire evacuation drills should take place 10 times a year (preferably once a month), at different times of the day, with records kept of the drills and action taken to prevent the recurrence of any problems;
- clear fire instructions should be displayed in all buildings; escape routes should be clearly signposted and free from obstruction;
- fire doors should be clearly marked, not held or wedged open and be kept clear on both sides at all times;
- fire-fighting equipment, alarms and smoke detectors must be checked regularly by a qualified contractor;
- adequate arrangements must be made for storing and disposing of flammable/combustible materials;
- electrical equipment should be serviced regularly to prevent fires;
- evacuation procedures should include arrangements for people with disabilities;
- appropriate measures are in place when buildings are in use outside normal hours.

This guideline is a living document and will be updated and revised when necessary. MSBA Risk Management will continue to be in contact with Manitoba Office of the Fire Commissioner to ensure ongoing compliance with fire safety in all Manitoba schools.

Thank you to Lorie Carriere and Paul Deacon for their interest and valued input!

Thank you,



Darren Thomas  
MSBA Risk Manager



# Educational Facilities Fire Safety Guide

## Fire Safety In Manitoba Educational Facilities

### A Guide for Educators

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## **Introduction**

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Schools present unique fire and life safety risks. School fires fall into several categories. Cooking, heating, electrical and intentionally set fires are the leading causes. Although fatalities from school fires are thankfully rare - students and staff do suffer injuries. Preventing school fires means taking action in three areas. The first is emergency planning. The second is education for staff and students about what actions to take in case of fire. The third step is ensuring the school building is kept fire-safe. The requirements in these three areas are contained in the National Fire Code of Canada (NFC). The NFC has been adopted by legislation in Manitoba and applies to all school buildings and facilities.

## **Emergency Planning** **Section 2.8.2.1**

Every educational facility must have a fire safety plan as part of their overall emergency planning. The plans include details on fire alarm procedures, building floor plans, staff duties in a fire emergency, exiting and holding fire drills – among many other details. The plans also help fire departments preplan their response to a school fire. Schools should work with their local fire departments when developing their fire safety plan.

## **Staff and Student Fire** **Safety Education**

Training in fire safety should go beyond preparing students for fire drills. Keeping a school fire-safe is a day-to-day job. Staff and students need to know about the causes of fires and how they can prevent one at their school.

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### More Information

The National Fire Protection Association (NFPA) has excellent materials to help educators in a wide range of fire safety topics.

Visit: <http://www.nfpa.org/safety-information>

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## Fire Code Compliance

Fire happens when a source of heat and a material that will burn come together. The amount of flammable and combustible material in any area of a school building must be controlled. Sources of heat and potential ignition must also be controlled.



## Decorative Materials Section 2.3.1.3

Decorative materials are considered to be anything applied over the existing wall or ceiling finishes. That includes everything from bulletin boards to things like posters, sports banners, maps, flags, photographs and artwork. The NFC says all decorative materials must have the same resistance to the spread of fire as the walls and ceilings of the building.



*Excessive combustible materials*

Educators and parents agree; a visually enriched environment is good for students. That means posting student artwork, projects and notices as well as teaching materials. The problem, of course, is that these displays and notices are almost exclusively made of paper or other readily combustible materials, all with extremely high flame-spread characteristics. The challenge for educators is to achieve a situation where combustible materials may be posted in schools while maintaining an acceptable level of fire and life safety.

## Classroom Walls Section 2.3.1.2(1)

This section allows the fire service to prohibit anything with a flame spread rating greater than the interior finish of the area in which they are located. The fire service however recognizes a need to display some material and are prepared to continue with this policy. "Combustible materials such as artwork and teaching materials which are attached to classroom walls shall not exceed

**Classroom Walls**  
**Section 2.3.1.2(1)**

20% of the area of such walls. This means that no more than 20% of the wall space in a classroom can be covered with decorative material. Floors and ceilings account for about 60% of the total surface area in a classroom. Of the remaining 40% about half is taken up with marker boards, windows and doors. The remaining 20% of the surface area in the room may be used for decorative materials. Areas on and around doors and windows must not be used. There is no exemption for seasonal decorations and walls must never be covered with plastic, paper, carpet, etc.

**Bulletin Boards**  
**Section 2.3.1.3**

Bulletin boards are the preferred way to mount decorative materials. The boards can be sized so they do not exceed the 20% guideline. Decorations that stick out from bulletin boards should be avoided, they can spread fire much more quickly than paper items secured flat to the board surface.



*Covered with plastic and excessive paper*

Bulletin boards must not be covered with plastic, fabric, multiple layers of paper, etc.. Bulletin boards may be covered with only 1 layer of paper (paper backing of bulletin boards is not allowed). Painting boards with latex paint is an acceptable alternative. Painting usually takes at least 2 coats. Keep to school related colors.

**Ceiling Decorations**  
**Section 2.3.1.3**

Ceilings in most classrooms are made up of suspended acoustic tiles. These tiles play a role in preventing the smoke from a fire getting into hidden spaces above the ceiling. Like every other surface in a classroom the tiles must be resistant to the spread of fire. Painting ceiling tiles with water-based paint will not affect how the tile resists fire. Oil paints and other combustible finishes may not be used. Any tile removed for painting must be replaced immediately with a temporary tile. The suspended ceiling must always be complete with no holes or missing tiles.



*Proper use of ceiling tiles*

**Ceiling Decorations**  
**Section 2.3.1.3**

When a fire is located close to the floor or in a corner there are usually safe pathways out of the classroom - as long as the fire is caught early. But fires overhead, burning in suspended materials can quickly block escape. Suspended items will spread a fire across an entire room, dropping down burning material to ignite new fires on desks, furniture and other combustibles and therefore are not allowed.



*Dangerous hanging materials*

Nothing should be hung from the ceiling in any part of a school, this includes mobiles. This is particularly important in schools with fire sprinklers. Material suspended from the ceiling will interfere with the proper function of the sprinklers, limiting their effectiveness. Ceiling decorations must not be hung from any of the sprinkler system heads or any other life safety system items.



*Hanging decorative material will quickly spread a fire across an entire room. Burning debris will drop down onto students. Paper, furnishings and other combustibles will be ignited. Safe exit through classroom doors may be blocked.*

### Hallways & Corridors Section 2.3.1.3

Hallways are usually the only means of exit from a school and are considered life safety areas. Decorative material must not exceed more than 5% of the wall area. All materials in hallways must be on bulletin boards and have all 4 corners stapled. 3D materials are not allowed. Materials must be kept at least 1m (3 feet) from room doorways and exit doors. Care must be taken not to obscure exit signs or other fire related items such as extinguishers, pull stations, etc. Materials put up in locked glass-fronted wall display cabinets do not count in the 5% calculation because they are safe from ignition.



*A hazardous amount of combustibles*

It is essential that hallways not be blocked by furniture, appliances, desks, tables, chairs, storage cases or combustible materials. Hallways and corridors permit quick evacuation are intended for life safety, therefore no blockages (including partials) are permitted (no storage).

Storage of teacher supplies are not permitted outside of classrooms. Only students' personal belongings are allowed in cubbies.

Exit doors, fire alarm pull stations, fire extinguishers and hose cabinets must remain un- obstructed and free of decorations.



*Hallway free of obstructions and storage.*

**Front Entrance, Exits &  
Means of Egress**  
**Section 2.7.1.6**  
**Section 2.4.1.1(1)**

All exits and means of egress must be maintained in good repair and be free of obstructions. These areas are considered life safety areas and must be kept clear. To maintain a corridor and exits free from obstructions, this means:

- ✓ Exits must be kept clear of furniture, desks, computer stations, storage, garbage bins, bags of sand and salt, snow etc.
- ✓ All exits must be cleared of snow and have a clear path to an area of safety or refuge away from the school.
- ✓ Stairwells must be kept clear of all storage and combustible materials e.g. lost and found, toys, bikes, etc.
- ✓ Doors must not be covered with combustible materials, e.g. paper, plastic, etc.
- ✓ Additional locks, chains, etc. cannot be added to exits. Exit doors are only permitted to have quick release exit hardware (panic bar).
- ✓ The use of wedges or kick stops are not permitted on fire doors/ smoke doors in public buildings. Doors shall be closed or held open by magnetic devices that release if the fire alarm is activated.



*Blocked/chained exit.*



*Snow blocked exit.*

Do not place combustible materials such as upholstered couches/ chairs/ garbage/lost and found/recycling containers or other furniture at/near/or around front entrances. Metal benches are the only acceptable furniture allowed at an entrance and only if placed in such a way as not to create an obstacle or tripping hazard during an evacuation.

All doors (fire doors) forming part of the means of egress shall be tested at intervals not greater than one month to ensure they are operable. This means:

- ✓ All doors must be operable, open freely and be able to completely close/latch on their own. Exit doors must be tested monthly.
- ✓ All classroom doors should remain closed and locked in order to effectively respond to a lockdown situation.
- ✓ The use of wedges is not permitted in public buildings and doors shall be closed or held open by magnetic devices that release if the fire alarm is activated. Fire doors and smoke barrier doors shall not be blocked or obstructed or otherwise made inoperable.



**Fixed & Portable  
Gates  
Section 2.7.1.1.(1)**

A means of egress shall be free from obstructions that would prevent its use and must be provided in conformance with the national building code. Fixed or portable gates must be equipped with thumb latch type. Double keyed deadbolts are not allowed as they are considered an obstruction in the event of a fire and will prevent a person from exiting the building safely.



Locked gate obstructing a safe exit from a stairwell.

**Furnishings, Draperies  
& Decorative  
Materials  
Section 2.3.2.1**

The NFC sets standards for the fire safety of fabrics and upholstery. Most furniture, carpets and draperies used in homes do not meet these requirements. In schools all fabrics must have a flame resistance rating. Acceptable materials will have a tag indicating they meet the appropriate Underwriter's Laboratories of Canada (ULC) standard. Fire resistance ratings are most often achieved by a combination of safe fabrics and use of flame retardant treatments. Over time the retardants break down and have to be renewed. If old furniture in the school does not have the appropriate flame retardant rating, they must be removed from the school. Used furniture is not to be used in Manitoba schools.



*Old couch brought into the school from a staff member's home.*

Other items to be concerned about are curtains, drapes and mats. These items when purchased by the school shall meet the proper flame restrictions as per National Fire Code of Canada.

All decorative materials such as curtains, drapes, hangings, bean bag chairs, tents and egg chair canopies, Christmas trees, or any other combustible decorative material shall be made of non-flammable materials and must conform to CAN/ULC-S109-03 "Flame Tests of flame resistant Fabrics and Films". This means the item must have a tag stating that it is flame resistant.

**Furnishings, Draperies  
& Decorative  
Materials  
Section 2.3.2.1**

If non-conforming, remove all items from classrooms.

No such material shall block or conceal any exit door, exit lights, fire alarm, hose cabinet or fire extinguisher. This also includes cardboard canvas, plastic partitions or walls sometimes used for haunted house or a similar event.

Schools must provide documentation that all curtains or fabrics hanging in classrooms and daycare areas meet the flame retardant requirements for drapes, curtains or other materials. Staff must have a certificate from the manufacturer stating that the curtains have been treated with a flame retardant or are made with flame retardant materials. The certificate or tag must indicate that the items meets the requirements of NFPA standard 701.

Administrators must keep a copy of the original certificate at the school and must be able to produce a copy of the certificate upon request of the fire inspector. This also applies to daycares.

Note: spraying furniture/drapes/or fabrics with flame retardant spray is **NOT** allowed unless performed by a person licensed to perform such treatment. A certificate of treatment must be provided upon request. Treatment must be applied in conformance with the appropriate NFPA standard.

**Christmas  
Decorations**

Only artificial Christmas trees will be allowed in the schools. All other decorations should be of non-combustible material whenever possible. At no time should combustible materials of any kind be allowed on or around doors or hung from ceilings. LED bulbs could be allowed if approved by school division.

**Housekeeping  
Section 2.4.1**

Every building or portion of a building shall be maintained in a neat orderly manner, free from any condition that would create a fire or life hazard or a condition, which would add to or contribute to the rapid spread of fire. Classroom supplies must be kept in closed cabinets or out of reach of students. Material stored on top of bookcases or cupboards must be no closer than 6" -12" from the ceiling and shall not overhang the edge of the cupboard. In sprinklered buildings a 0.5m (18 inches) clearance must be kept around and below sprinkler heads. Clutter should be kept to a minimum and should be restricted to items of obvious value and usefulness. Many intentional school fires are set in accumulations of paper and other refuse.

Collections of paper also play a role in many electrical fires. Proper storage, away from sources of ignition greatly reduces the risk of a classroom fire.

## Housekeeping Section 2.4.1



The need for good housekeeping applies to custodial and maintenance work as well. Flammable and combustible materials must be stored in appropriate rooms. Cleaning materials and other combustibles must not be stored in furnace, mechanical or electrical rooms. Gasoline must be stored in safety containers when stored inside the school. Propane may not be stored inside school buildings and must be secured in proper caged storage location, with a minimum distance of 20 feet.

## Intentionally Set Fires

Student fire-play accounts for about 25% of fires in elementary schools and up to 40% of fires in high schools. Care should be taken to remove decorative materials from areas where students can gather unobserved by staff. Many schools have policies that prohibit students from bringing matches and lighters to school.



*Even the smallest intentionally set fire must be reported to the local fire department and police. Positive, skilled intervention - particularly with very young fire setters - is essential.*

For a fire to start a source of heat must be brought into contact with something that will burn. There does not have to be an open flame. An overheated extension cord left in contact with a stack of papers will dry out the paper over time, eventually igniting a fire. All fire safety measures in schools are designed to keep potential sources of ignition away from combustible materials. All combustible materials must be stored a minimum of 20 feet from building.

## Electrical Equipment Section 2.4.7.1

Misuse of electrical cords and devices is a pressing concern. Overloaded power bars and outlets can be found in most classrooms. There are many more electronic devices in classrooms now than just a few years ago. Lamps, aquariums, battery chargers and even decorative light strings are now found in schools. Most often these devices are plugged into

**Electrical Equipment**  
**Section 2.4.7.1**

extension cords or power bars. Drawing too much current from an outlet can lead to overheating, providing a source of ignition.



*Overloaded power bar*



*Power bars and extension cords strung together*

Extension cords may not be used as a substitute for permanent wiring. These cords are intended for temporary, short term use. They can become damaged or over-heated and lead to a fire. When items are needed for long term use, a power bar or an additional electrical outlet may be required.

Of particular concern are outdoor cords used inside and cords that run up walls and across ceilings or those located under or behind furniture. This misuse of extension cords is not allowed. Computers, monitors, lamps and other equipment must be plugged directly into a wall outlet or into a single power bar. Power bars must be UL and/or CSA listed. No outlet should be allowed to supply more than one power bar and power bars cannot be ganged together. Power bars must be GFI and have an on/off switch.

**NOTE:**

Note: multi adaptor plugs are not allowed.

**Small Appliances &  
Lamps**  
**Section 2.4.7.1**

All appliances must be plugged directly into outlets. Extension cords and power bars are not allowed to be used for this purpose. Classrooms/offices should not contain small appliances. This includes: coffee makers, microwaves, toasters, toaster ovens, kettles, fridges, etc. Schools with lunch programs are allowed to keep the microwaves in the lunch areas. All other appliances with the exception of the toaster ovens are to be kept in staff rooms and unplugged after use. Toaster ovens are considered a fire hazard and not allowed. Coffee makers must also have automatic off switches.

Refrigerators/freezers can be kept in gym office for ice packs only.

Single use coffee makers such as Keurig, Tassimo, etc. can overheat, melt and start fires if left plugged in all day/night/weekend. These appliances must be unplugged at the end of the day or after each use.

Many lamps designed for use in the home are not safe for use in school classrooms. Lamps and other lighting devices must meet several requirements. Lamps should be permanently mounted or used where they cannot be knocked over. To be acceptable the bulb protector and/or shade must be non-combustible. Halogen and other high-heat lamps may not be used.

**Small Appliances &  
Lamps  
Section 2.4.7.1**



*Scorched shade    Maximum allowed wattage label    Christmas lights in classroom*

Lamps will have a label indicating a maximum wattage for incandescent bulbs. Never use a bulb with a higher wattage rating than indicated on the lamp. Don't use lamps with a rating higher than 60 watts. Lamps must not be plugged into extension cords. Low-heat LED bulbs are the preferable choice.

Compact florescent light bulbs (CFL's) are in common use. CFL packaging will indicate an equivalent wattage rating compared to an incandescent bulb. Again, never use a bulb with a higher wattage rating than indicated on the lamp. When CFL's fail they often produce some smoke. If you see smoke unplug the lamp and allow 20 minutes for the CFL bulb to cool before replacing it.

Non-LED decorative light strings, like Christmas lights, should not be used. They cannot be hung from ceilings or surface mounted in contact with any combustible material like poster board.

Portable heaters must be CSA or UL approved. Heaters must be kept a minimum of 1m away from combustible materials. Heaters must be turned off and unplugged at the end of the day. All heaters must be pre-approved by maintenance and administration prior to use.

**Electrical Rooms  
Section 2.4.1.1(2)**

Electrical rooms are not storage rooms and are not intended for the storage of combustible materials. Except when permitted by the enforcing agency, boiler rooms, mechanical rooms, transformers, switch gear vaults and electrical panel rooms shall not be used for storage. These rooms must have 1m clearance in front of the electrical panel and a 1m unobstructed path from the door directly to the panel. All Electrical panel doors must be closed and secured with a lock. Only custodial staff or trades staff are allowed to open and tamper with the panel or breakers.



**Combustible Storage**  
**Section 2.4.1**

Combustible waste materials in buildings shall not be permitted to accumulate in quantities or locations that will constitute an undue fire hazard and shall not be permitted to accumulate in any part of an elevator shaft, ventilation shaft, stairway or fire escape.

**Stairwells:** Space under stairs and landings must not be used for storage unless separated by a 2-hour fire rated wall and equipped with a heat sensor.

**Storage Rooms:** a clear means of egress must be provided to all areas of the storage room via a 1m path. Items cannot pack the room fully, front to back, and must be arranged in aisles with a minimum 1m access path. Storage rooms must also be equipped with a heat sensor and appropriate fire rating.



*Storage room packed front to back – no aisles*

**Gym Storage Rooms:** must have a clear means of egress throughout all areas of the room. There must be a 1m path from the door to all accessible areas of the room. Walls with shelving must have a 1m path in front of the shelving with aisles.

**Crawl Spaces:** Horizontal concealed spaces, such as crawl and ceiling spaces, shall not be used for the storage of combustible materials, gym equipment, desks, tables, etc.



## Recycling Containers Section 2.4.1.1(1)



The Fire Prevention Branch strives to protect the safety of students and school staff while acknowledging the importance of environmental stewardship within schools. However the majority of issues that arise around recycling are due to the need to limit the accumulation of combustible material and maintain obstruction-free means of egress.

- ✓ Classrooms: may utilize one container with a maximum volume of 20 liters to collect recycling. The container may be plastic or metal.
- ✓ Hallways: One larger non-combustible (metal) container may be located within a corridor or common area provided it does not obstruct the means of egress. Ideally, it should be located within an alcove in the corridor.
- ✓ There will be a limit of one larger container, per corridor. Special consideration is given to larger schools to have more than one container per corridor, but not in excess. Large metal indoor bins are provided free of charge from Recycle Everywhere.  
<http://www.recycleeverywhere.ca/request-bins-old/free-bin-models/>.
- ✓ No recycling containers are permitted within exits, exit vestibules or adjacent to exits.
- ✓ No recycling containers are permitted in washrooms or secluded locations that are not routinely supervised. The majority of incendiary fires occur within these areas.
- ✓ All recycling containers containing combustible material must be emptied daily into an outdoor receptacle.
- ✓ Daycares: Day care centers and nursery schools are required to abide by stricter guidelines. Those guidelines will be enforced within portions of the school occupied by the day care or nursery school.

## Fire Department Access to Buildings Section 2.5 Sections 2.7.1.7(1)

Fire department vehicles shall have direct access to at least 1 face of every building by means of a street, yard or private roadway. Access panels or windows provided to facilitate access for fire fighting operations shall not be obstructed by vehicles, vegetation, signs or any form of construction. Streets, yards and private roadways provided for fire department access shall be maintained so as to be ready for use at all times by fire department vehicles. Vehicles shall not be parked to obstruct access by fire department vehicles and signs be posted prohibiting such parking.



Access to fire department connections (outdoors) must be maintained and free of obstructions at all times and all year around. This includes the removal of snow, trees, bushes, etc..

**Fire Department  
Access to Buildings  
Section 2.5.1  
Sections 2.7.1.7(1)**

Where access to a roof is provided for fire fighting purposes, keys shall be provided for locked roof access doors in an acceptable location accessible to the fire fighters, e.g. fire dept. lock box at the front door of the school.

**Storage of Flammable  
Liquids  
Section 4.2.6**

Flammable and combustible liquids (Science, IA, Custodial) at the school shall be kept in closed containers and stored in flammable liquids cabinets.

- ✓ Storage outside of a flammable liquids cabinet shall not exceed 10L (of which only 5L may be a Class I liquid (gasoline)).
- ✓ Storage inside a flammable liquids cabinet shall not exceed 250L of which 10L of a Class I liquid (gasoline), 60L Class II liquids.
- ✓ In an Industrial Arts area, storage of up to 75L of flammable liquids are permitted, this includes not more than 25L of Class I liquids (gasoline).
- ✓ Where individual containers with a capacity of more than 5L are required for storage of flammable liquids, ULC approved metal safety containers with a spring loaded cap, of not more than 25L capacity shall be used.



*Laboratory fire as a result of improper use and storage of flammable liquids.*

Please note that the plastic storage cans are NOT acceptable for gasoline storage or transfer in a school. The plastic cans are designed for temporary outdoor storage and immediate transfer. For example, the ideal situation, involves purchase of gas at a commercial location and transport to a boat where the boat tank is then immediately filled. A further requirement is that the metal safety can, if brought into a school is kept in a room, with a fire separation, which is vented at floor level to the exterior.

**Assembly Events &  
Occupancy  
Section 2.7.1.5**

Overcrowding, blocked exits /hallways and lack of access for emergency vehicles as a result of blocked fire lanes during assembly events are common complaints to fire inspectors. These types of things can cause confusion and further panic during an emergency. Experience has shown that in terrible tragedies, victims rarely die from the actual effects of fire, but instead from smoke inhalation or trampling during the confusion.

Rooms or floor areas with an occupant load over 60 people, including but not limited to gymnasiums, cafeterias, and theatres are required to have occupant loads posted. Occupant loads can be calculated by the School Division and approved by the local fire or municipal inspectors.

**Assembly Events &  
Occupancy  
Section 2.7.1.5**

At the minimum the occupant load for the most common use of the room or floor area must be posted. When a temporary modification of an assembly changes the common use of the room or floor area, such as graduation ceremonies, concerts, dinners, etc. The occupant loads will decrease due to the use of staging, tables or chairs. As a result, administrators need to ensure that occupancy loads are not exceeded. This can be accomplished by holding an event over several days and limiting tickets to only the occupant load numbers.

**NOTES:**

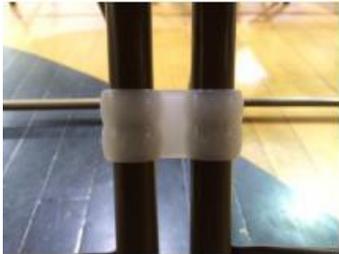
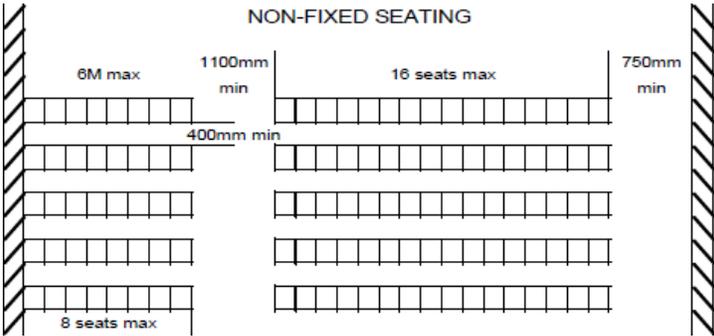
The use of CANDLES / OPEN FLAMES - are "prohibited" on all school grounds and property. There shall also be no smoking or open flames in the building or during any public assembly.

LOST & FOUND - during an assembly event, the occupancy of the school may be doubled or tripled due to the family members in attendance at the event. Placing tables filled with lost & found items blocks the hallway. In the event of an emergency, the tables become an obstacle or tripping hazard. Hallways are meant for access/egress only and tables/chairs must never be placed in the hallways during these events or any other time. It is recommended that these items either be placed in the gym at the back, in the library or in another classroom location.

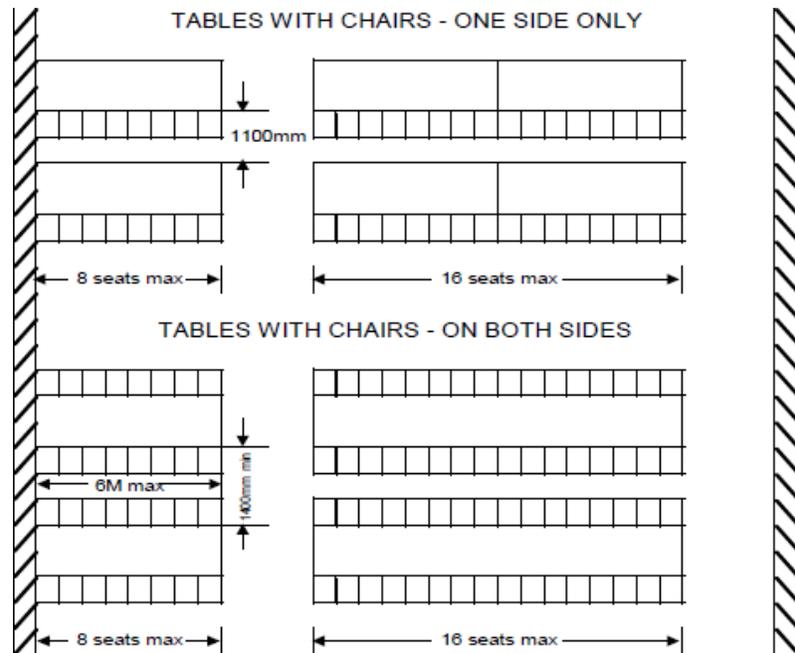
**Chair Ganging  
Section 2.7.1.5 (1)(f)**

Administrators are responsible to determine how chair ganging will be accomplished for each school and must follow the requirements for non-fixed seating from the Manitoba Fire Code. Non-fixed seating applies to seats that are not permanently attached in one position.

Typically, non-fixed seating will either be arranged in rows (indoors or outdoors), or at tables. When any assembly contains more than 200 seats, the seats in a row shall be fastened together (ganging) in units no fewer than 8 seats. If the row has 7 or fewer seats, then all the seats in the row shall be fastened together. Fastenings may include the use of Velcro strips or plastic couplers.



**Chair Ganging**  
**Section 2.7.1.5 (1)(f)**



**Fire Department**  
**Access**

During assembly events all exits must be kept clear of chairs, tables and debris. At no time shall an exit be blocked. Hallways must be kept clear. The display of art work, raffles, lost and found items, food, etc. must take place in a classroom, library or gymnasium. Tables must not block hallways and exits. Blocked exits and obstructions in corridors such as tables and chairs cause confusion and further panic when an emergency or fire occurs.

School administrators shall also ensure that all fire lanes remain free and clear of vehicles. Fire department vehicles must have direct access to all fire lanes around the school. Additional staff should be available during these events to direct traffic and ensure that these areas remain free and clear.

**Scenery, Sets and**  
**Draperies**  
**Section 2.3.2.1**  
**Section 2.3.2.2**

Scenery should be constructed using fire-resistant materials and coatings, or made fire-resistant by treatment with a flame retardant, particularly where there are proximate sources of heat, or other causes of ignition. This also includes cardboard canvas, plastic partitions or walls sometimes used for haunted house or a similar event. Foam plastics and materials containing foam plastics should not be used due their ability to render toxic smoke when burned. Wood Construction and flammable decorations not permitted. Anything that is constructed of flammable materials must be flame treated by a professional company. It is strongly recommended that local fire authorities, or the authority having jurisdiction, be consulted in determining requirements.

Drapery shall be treated as required with flame retardant or constructed with fire-retardant materials, particularly where there are proximate sources of

**Scenery, Sets and  
Draperies**  
Section 2.3.2.1  
Section 2.3.2.2

heat, or other causes of ignition. Please note that draperies must conform to NFPA 701 and should have a sticker, tag or certificate that comes with it when purchased. This information must be kept on site and made available when requested by the fire inspector.

**NOTE:**

No such item (scenery) or material shall block or conceal any exit door, exit lights, fire alarm, hose cabinet or fire extinguisher.



**Fire Separations**  
Section 2.2.1.2

These are two types of separations:

- ✓ Vertical separations (walls etc.)
- ✓ Horizontal separations (floors or ceilings)

These separations are built into the building at the time of construction to separate the building into Fire Compartments. The spread of fire must be contained in a building between compartments under fire conditions. Any renovations to the building including plumbing and electrical that breach these fire separations must be repaired with fire stopping. Where fire separations are damaged so as to affect their integrity, they shall be repaired so that the integrity of the fire separations is maintained. Any openings (doors, etc.) in a fire separation must be sealed with a closure that has a Fire Protection Rating.



**Kilns/Ventilation**  
**Section 2.4.1.1**  
**Section 2.6.1.5**

Kilns for firing ceramics and glass can be installed safely in schools by following these steps:

- ✓ The kiln should be placed no closer than 18" from any wall. However for operator comfort and maintenance at least 1m should be maintained all the way around the kiln. Note: kilns can heat to between 1800°F to 2400°F and the metal jacket will be come extremely hot to touch.
- ✓ Kilns must be placed a non-combustible floor such as concrete or ceramic tile. Do not place kilns on wood, carpet or vinyl floors as they may discolor then ignite from the intense heat of the kiln.
- ✓ Sprinkler heads should not be placed directly above the kiln or be adequately rated so that they will not be activated through normal use of the kiln.
- ✓ Kilns have special power requirements due to the high temperatures that they need to reach. Ensure your panel/breaker is rated for the voltage and phase of the kiln power supply. For kilns equipped with a power cord, place the kiln so that the cord can be plugged in without touching the stainless steel jacket. **DO NOT** add extension cord to the power cord plug. A standard extension core will not be able to handle the power and will cause a fire.
- ✓ All kilns must be vented. Clay, glass and other items that are fired in the kiln can emit toxic/odorous fume that need to be vented from the room. Venting using existing main HVAC system is not allowed. Downdraft vents or overhead vents must be used. Ventilation must be interlocked with the kiln on/off power switch.
- ✓ Combustible materials must not be located/stored around the kiln and must be maintained at a minimum 1m from the kiln. It is best to keep storage of combustible materials out of the kiln firing room. The only storage allowed in the kiln room would be for ceramic ware and finished fired items.
- ✓ Kilns must be fired only on the metal stand or frame provided. The space beneath the kiln is necessary for air circulation, and prevention of heat build up. ALWAYS ensure the stand is level to avoid problems such as glaze flow, kiln sitter activation, or toppling.
- ✓ Any kilns used over night must be brought to the attention of maintenance staff.
- ✓ Fire extinguishers must be located in close proximity to the room.



*Proper storage & overhead Ventilation.*



*Down draft ventilation from the bottom of the Kiln.*

## Fire Systems

Fire detection, alarm and extinguishing systems must be maintained in an operative condition at all times, and must be replaced or repaired where defective.

### Standard for Portable Fire Extinguishers NFPA 10

#### Fire Extinguishers:

- ✓ Must be inspected monthly.
- ✓ Installed so that they are within 75 ft. travel distance to all portions of a building. Be located adjacent to corridors or aisles that provide access to exits.
- ✓ Mounted on the wall between 3.5 - 5ft. mounting typically will depend on the weight of the extinguisher.
  - Extinguisher less than 40 lbs. can be mounted no higher (top of the extinguisher) 5ft from the ground.
  - Extinguishers more than 40lbs can be mounted no higher (top of the extinguisher) than 3.5 ft. from the ground.
- ✓ Shall be recharged after each use.
- ✓ Where visual obstructions can not be avoided, fire extinguisher signs must be installed at a height high enough to see over the obstruction. (6.5 ft. or higher).
- ✓ Note: Cafeteria's that operate deep fryers must be fitted with a class K extinguisher

### Fire Alarm Systems Section 6.3.1.1 Section 5.6.1.13

#### Fire Alarm Systems:

- ✓ Must be operational at all times (checked daily for indicator lights).
- ✓ Must be inspected on an annual basis by a certified technician
- ✓ Fire Watch: In the event that the panel is no longer functioning, due to an issue or as a result of construction a building wide fire watch must be initiated. Every room must be inspected for smoke/fire at intervals not greater than 1 hour. Insurance must be notified through MSBA Risk Manager in the event of non-functioning alarms or sprinklers.
- ✓ Fire Warning: In the event that the panel is no longer functioning the school administrator must provide a means of communication to alert staff in the event of an emergency.

### Emergency Lighting Section 6.5.1

#### Emergency Lighting:

- ✓ May be provided by battery packs with remote and attached heads, or by emergency generators that will illuminate specified A/C fixtures or remote light heads.
- ✓ Must be operational, no visible damage, with heads aimed in proper direction.
- ✓ Must be inspected/tested by staff on a monthly bases.
- ✓ Must be serviced and labelled on an annually by a certified technician.

**Fire Dampers**  
**Section 2.2.2.4 (5)**  
**NFPA 80**

Fire Dampers are used to prevent transmission of flame where air ducts penetrate fire barriers. They can also be in air transfer openings in walls and partitions.

Smoke Dampers are installed in ducts and air transfer openings that are designed to resist the passage of air and smoke. They are installed to operate automatically and controlled by a smoke detection system.

The Manitoba Fire Code requires fire/smoke dampers and fire stops to be inspected at intervals not greater than 12 months to ensure they are in place and are not obviously damaged. However for large buildings having numerous fire dampers, this annual inspection has become a financial hardship and often requires contractors to obtain access to the fire dampers. Therefore NFPA 80 states that inspection and testing for assembly occupancies is as follows:

- ✓ Each damper shall be tested and inspected 1 year after installation.
- ✓ The test and inspection frequency shall then be every 4 years,

**Fuel Fired Heating Systems**  
**Section 2.6.1.6(3)**

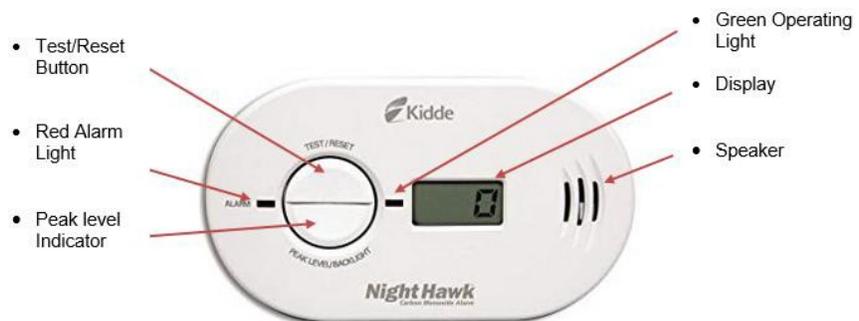
Fuel Fired Heating Systems:

- ✓ Must be inspected and serviced at intervals not greater than 12 months by a qualified technician licensed by the province or local municipality.
- ✓ Laundry dryer vents must be maintained and cleaned as necessary to control combustible material accumulation and reduce any fire hazard.
- ✓ A qualified service technician must also inspect dryer vents annually.

**Carbon Monoxide Detectors**  
**Section 6.7.1.1**

Carbon Monoxide (CO) detectors must be inspected, tested and maintained in conformance with manufacturer's instructions. Inspection and testing is typically conducted by custodial staff. For most CO detectors the units are required to be tested on a monthly basis. The following steps are used for testing:

- ✓ Test the unit by pressing the test/reset button.
- ✓ If the unit is operating properly, you will hear 4 quick beeps, followed by 5 seconds of silence, followed by 4 quick beeps.
- ✓ The display will show three "eights" (888) and then show a number, usually around 200.
- ✓ Within several seconds, the unit will return to monitor for CO (display 0).



**Boiler & Heating  
Rooms  
Section 2.4.1.1(2)**

Boiler rooms and HVAC or fan rooms :

- ✓ Must be separated from the school and maintained clear of storage.
- ✓ All Fuel-fired heating systems must be inspected and labelled annually by a certified technician.
- ✓ Boiler room doors must be closed and locked at all times.
- ✓ Boiler certificates must be posted on the wall next to the boiler.

**Fire Drills  
Section 2.8.2.1**

The National Fire Code of Canada (Mb Amendment) requires that fire drills in schools attended by children are to be held 10 times per year and at least five times during each of the fall and spring school terms. The first fire drill shall be held within the first week of the fall term, followed by four more drills evenly distributed between this time and the end of the fall term, The same sequence shall occur following the start of the winter (spring) term, ensuring that drills are conducted during the winter months as they present unique problems that may require additional planning. All drills must be documented on a fire drill record.

**Fire Safety Checklist**

**Fire Safety Checklist:**

Use the attached checklist to grade the fire safety of your classrooms and buildings. Creating a fire-safe learning environment does not have to take a lot of time or effort.



## SCHOOLS AND EDUCATIONAL OCCUPANCIES

### OWNER / OCCUPANT INSPECTION INFORMATION



### Checklist: Common Fire Safety Requirements

The Manitoba Fire Code requires building owners or occupants to comply with the requirements on this checklist.

These requirements are not a complete list; there may be additional requirements for your occupancy.

#### SCHOOLS AND EDUCATIONAL USES INCLUDE:

- Public & private schools
- Universities & Colleges



Winnipeg Fire Department

Fire Prevention Branch  
2<sup>nd</sup> Floor - 185 King St.  
Winnipeg, MB, R3B 1J1  
Call 311

[Email](#)

- Address:** Must be visible from road and lane, free from foliage, trees, etc.
- Combustible Artwork:** Shall not exceed 20% of the wall or ceiling area.
- Corridors:** Must provide clear access to exits.
- Drills & Evacuation:** Fire evacuation plans and procedures are complete, up-to date and prominently posted. Monthly fire drills conducted and recorded.
- Egress:** Corridors, stairs and exits are unobstructed and in good repair.
- Electrical:** Electrical appliances bear the label of a testing laboratory (ULC, CSA). Coffee makers, hot plates, toasters, etc. are unplugged when not in use. Outlets are protected with secure covers.
- Emergency Lighting:** May be provided by battery packs with remote and attached heads, or by emergency generators that will illuminate specified A/C fixtures or remote light heads. Must be operational, no visible damage, with heads aimed in proper direction, and serviced and labelled annually by a certified technician.
- Exit doors:** Exit doors: Ensure all exits are unobstructed and doors are easily openable. All emergency exits are required to be easily openable and meet MB Fire Code requirements.
- Exit signs:** Exit signs and exit lighting are readily visible and illuminated.
- Extension Cords:** Kept to a minimum and not overloaded.
- Fire Alarm System:** Checked daily for indicator lights, tested, inspected and labelled annually by a certified technician.
- Fire Doors:** Fire doors or stairway doors are **NOT** wedged or blocked open and doors close and latch properly.
- Fire Separations:** must have no holes or openings that compromise their purpose.
- Flammable liquids:** Must be stored in approved containers, cannot be dispensed into metal containers unless grounded, cannot be stored next to exits. Vapours cannot be allowed to accumulate.
- Boiler or heating area:** Must be separated from the school and maintained clear of storage. Fuel-fired heating systems must be inspected and labelled annually by a certified technician.
- Housekeeping:** Trash and debris are contained in non-combustible waste receptacles.
- Locking devices on exit doors:** Shall be readily opened from the inside.
- Portable Fire Extinguishers must:**
  - Be located adjacent to corridors or aisles that provide access to exits.
  - Be mounted in a visible location, accessible, and serviced and tagged at least once every 12 months by a certified technician.
  - Be full and functioning (no damage, corrosion, leaks malfunctioning parts or clogged nozzles).
  - Have a minimum rating of 2A-10BC
- Portable Heaters:** Must be an approved type and kept away from combustibles.
- Sprinkler and standpipe connections:** Must be capped, free of debris and accessible.
- Sprinkler valves:** Must be in the open position, either locked and chained or sealed and monitored electronically. No storage permitted within 18 in. of bottom of sprinkler heads.



# FIRE/EVACUATION/TORNADO/LOCKDOWN - DRILL REPORT

The Safe Schools Regulation (Section 7) and the Manitoba Fire Code require schools to conduct fire drills 10 times during the school year, usually one within the first two weeks of school and then once a month for the remainder of the school year. Manitoba Education requires that schools practice lockdown drills at least twice each year and at least once during each term or semester but practicing more often is preferred by authorities. All schools must also conduct two tornado drills each year.

SCHOOL: \_\_\_\_\_ ADDRESS: \_\_\_\_\_

ADMINISTRATORS SIGNATURE: \_\_\_\_\_ DATE: \_\_\_\_\_

DATE OF FIRE DRILL	TIME OF DRILL	PULL STATION USED	LENGTH OF TIME TO EVACUATE	COMMENTS
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
DATE OF LOCKDOWN	TIME OF DRILL	REASON FOR LOCKDOWN (I.E. INTRUDER, WEAPONS DRILL)	LENGTH OF TIME TO SHELTER	COMMENTS
1.				
2.				
3.				
4.				
DATE OF TORNADO DRIL	TIME OF DRILL	WERE SHELTER AREAS ADEQUATE	LENGTH OF TIME TO SHELTER	COMMENTS
1.				
2.				

\*\*\*Keep a copy on file for the Police/Fire/Labour Inspectors. At the end of the school year email a copy to the divisional Safety Officer.

