

Weather

This section includes background information and sample preparedness guides on:

- [Air Quality Health Index](#)
- [Lightnings](#)
- [Temperatures](#)
- [Tornadoes](#)
- [UV Index](#)
- [Winds](#)

Air Quality Health Index

Source: Environment Canada, 2017

In June 2015, in partnership with Environment Canada, the Ontario Ministry of the Environment and Climate Change adopted the National Air Quality Health Index to report air quality in Ontario.

The Air Quality Health Index is a tool designed to communicate the health risk for students vulnerable to the effects of air pollution (students with diabetes, heart and lung disease) as well as for the general student body. It forecasts local air quality for the current day and the next day. It is designed to assist in health-related decisions. The index does not measure the effects of odour, pollen, dust, heat, or humidity on health.

This section includes:

- [Index Scale and Weather Information](#); and
- [Sample Air Quality Health Index Preparedness Guide](#)

Lightning

Source: Environment Canada, 2017

Lightning is the occurrence of a natural electric discharge of very short duration and high voltage between a cloud and the ground or within a cloud, accompanied by a bright flash and typically also thunder.

This section includes:

- **Background information on Lightning**; and
- **Sample Lightning Preparedness Guide**

Temperatures

School administrators, teachers, coaches, intramural supervisors must be familiar with and implement their school board's temperature policy for cold and hot weather conditions to make informed decisions for student safety. When conducting outdoor physical activities reference your school board's:

- Temperatures that are safe for students to be physically active outdoors.
- Temperatures that are not safe for students to be physically active outdoors.
- Temperatures that require accommodations for student safety when physically active outdoors.

Note: Specific temperatures (hot or cold) are not provided in the Ontario Physical Activity Safety Standards in Education because a provincial survey of boards indicated a discrepancy in the temperatures considered to be unsafe. Therefore, one should access and follow their school board's temperature policies for outside activities.

This section includes:

- [Information on Cold Weather-Related Conditions and a Sample Cold Weather Preparedness Guide](#)
- [Information on Hot Weather-Related Conditions and a Sample Hot Weather Preparedness Guide](#)

Tornadoes

Source: *Environment Canada, 2017*

- A tornado is a violently rotating column of air that extends from a cumuliform cloud to the surface. A tornado can be tens to hundreds of metres wide and have a lifespan of minutes or hours. In terms of size and area, it is one of the least extensive of all storms, but in terms of how violent storms can be, it is the world's most severe. Winds can range from 90 to 315 km/h or greater. Canada has the second highest tornado occurrence rate in the world, behind the United States.
- What to look for:
 - A funnel cloud that extends fully or partially from the cloud to the surface.
 - Rotating debris near the ground or a spray near the water surface.
 - Sky may be an unusual green colour
 - Wind will sound like a freight train.
- What to listen for:
 - Tornado Watch: A watch issued by Environment Canada's Meteorological Service when severe thunderstorms are forecast, and conditions are favourable for one or more tornadoes to be spawned from those thunderstorms within a defined 'watch' area.
 - Tornado Warning: A warning issued by Environment Canada's Meteorological Service when at least one tornado is imminent, as indicated by observation, reports and/or radar scans.
 - Severe Thunderstorm Watch: Severe thunderstorms are possible in your area.
 - Severe Thunderstorm Warning: Severe thunderstorms are occurring.
- Note: Tornadoes occasionally develop in areas in which a severe thunderstorm watch or warning is in effect. Be vigilant to signs of an approaching tornado. Severe thunderstorm and tornado watches are often issued several hours in advance of thunderstorm developing. On the other hand, it may be a rapidly developing situation with less than an hour before the storms impact.
- This section includes a [**Sample Tornado Preparedness Guide**](#).

Ultraviolet (UV) Index

Source: *Environment Canada, 2017*

- The Ultraviolet (UV) Index was developed to help Canadians protect themselves from the sun's damaging UV rays (for example, sunburn, eye cataracts, skin cancer). The higher the UV Index the stronger the sun's rays, and the greater the need to take sun precautions and limit the amount of time in the sun. In Canada the UV Index ranges from 0 – 11+.
- Exposure Category:
 - Low = 0-2
 - Moderate = 3-5
 - High = 6-7
 - Very High = 8-10
 - Extreme = 11+
- The UV index will be communicated in your local weather report when the index is 3 or higher.
- This section includes a [Sample UV Index Preparedness Guide](#).

Winds

Sources: Environment Canada, 2017 and the Beaufort Wind Force Scale (an empirical measure that relates wind speed to observed conditions on land or sea)

- High winds are a significant weather hazard that may affect both land and water activities. The effects of the wind (for example, what the wind is blowing) can cause injury and damage to persons and property.
- What to listen for:
 - Wind Warning: Parameters Environment Canada uses for issuing a wind warning.
 - Threshold criteria: 70 km/h or more sustained wind and/or gusts to 90 km/hr or more.
 - A wind warning can be issued but no wind watch alert will be issued by Environment Canada.
 - Wind speed is included in forecast when speed is greater or equal to 20 km/h
- This section includes a **Sample Wind Velocity Preparedness Guide**.
- Resources to consult: Ontario Federation of School Athletic Associations (OFSAA)/Provincial Sports Governing Bodies (wind for outdoor activities)