

AVON MAITLAND DISTRICT SCHOOL BOARD

ADMINISTRATIVE PROCEDURE

NO. 219

SUBJECT: SUN AND EXTREME TEMPERATURE SAFETY

Legal References: *Education Act: Section 264 Duties of Teacher: Pursuit of Learning; Section 286 Duties of Supervisory Officers: Assist Teachers; Ontario Regulation 298 - Operation of Schools: Section 11 Duties of Principals: Supervise Instruction, Outlines of Courses on File; Section 20 Duties of Teachers: Effective Instruction; The Ontario Curriculum - by grade: K-Grade 8; by subject: Grades 1-8; Ontario Secondary Schools Grades 9 to 12 Program and Diploma Requirements 1999*

Related References: *Administrative Procedure 180 First Aid and Medical Emergencies; AP 266 Field Trips and Excursions, Safety Guidelines*

1. Direction on Sun and Extreme Temperature Safety

The Director of Education provides this administrative procedure to:

- a) promote a healthy school environment which supports and promotes sun safety as well as extreme heat and extreme cold protective practices for students and staff through words, actions and modeling,
- b) increase student, teacher and community awareness of skin cancer and other skin damage caused by UV radiation,
- c) increase student, teacher and community awareness of when exposure to extreme temperatures can cause serious, sometimes life-threatening, health problems. In order to keep safe, you should know how to prevent heat and cold related health problems, as well as to know what to do if there is an extreme temperature event,
- d) encourage all members of the school community to protect their skin from UV radiation, particularly at high-risk times such as lunch times, sporting events, and outdoor excursions, and
- e) encourage members of the school community to protect their bodies from hypothermia and their skin from frostbite when extreme cold and wind cause the human body to lose heat, and to protect themselves from adverse health effects which can result from exposure to extreme heat: heat cramps, heat exhaustion and heat stroke.

2. Responsibilities of the Principal

- 2.1 Bring to the attention of all staff AP 219--Sun and Extreme Temperature Safety (at the beginning of each school year and in early spring and late fall as appropriate).
- 2.2 Make decisions about when to hold indoor recess as dictated by weather conditions; that is, cold weather alerts, wind chill warnings, and UV warnings provided by Environment Canada. When weather conditions are questionable, principals may consult Environment Canada's website: www.weatheroffice.ec.gc.ca
 - 2.2.1 Students need an opportunity to be physically active. However, weather conditions sometimes warrant indoor routines or a reduced activity level; for example, during extreme heat, high UV, wind chill and/or extremely cold temperatures.

- 2.2.1.1 Extreme Cold: When temperatures are below -20°C principals should seek information about the impact of wind chill values and refer to the wind chill chart in the appendix. (Note that wind chill will only appear in the forecast if the wind chill is equal to or greater than -25.) With a wind chill of up to -27, Environment Canada states the risk of frostbite is low providing students are properly dressed for the weather. When the wind chill exceeds -28 the risk of frostbite is higher when students are exposed for 30 minutes or more. Principals should consider limiting outdoor time to 30 minutes or less.
- 2.2.1.2 Extreme Heat: When the temperature reaches or exceeds 30°C, principals should seek information about the humidex and refer to the humidex chart in the appendices. (Note that a humidex advisory is issued by Environment Canada when temperatures are expected to reach or exceed 30°C with a humidex of 40 or greater.) When the humidex is greater than or equal to 40, students and staff should be encouraged to take cooling precautions, and physical exertion should be restricted. If the humidex is 40 or more, principals should consider an indoor routine. To avoid heat-related illness, students and staff should be encouraged to drink plenty of water, avoid going out in the blazing sun, try to stay in the shade as much as possible, and wear a hat.
- 2.2.1.3 Very High to Extreme UV: When UV values reach or exceed 3, principals should seek additional information from Environment Canada and refer to the UV index chart in the appendices. (Note that Environment Canada includes UV values in forecasts when values reach 3 or higher.) When the UV index is 3-7, students and staff may follow a regular routine with precautionary measures such as using sunscreen, seeking shady areas, and wearing proper clothing. When the UV index is 8-11+, principals may consider limiting outdoor time, and measures should be taken to limit exposure to the sun's rays by seeking shady areas and using proper sun protection and clothing, especially during the hours 11:00 a.m.-4:00 p.m. If the UV index is 11 or greater, principals should consider keeping students indoors during recess and lunch hour.
- 2.2.2 Actively promote sun and extreme temperature protection when appropriate in school newsletters, during assemblies, at school council meetings and at staff meetings.
- 2.2.3 Communicate to parents/guardians the importance of supplying their children with appropriate clothing or protections for outside activities. In extremely cold weather, students should be encouraged to wear multiple layers of clothing, boots, hats, and gloves, to cover all exposed skin. In hot weather, students should wear light loose-fitting clothing and drink plenty of water.
- 2.2.4 Ensure sun protection strategies are incorporated into outdoor events. Attention should be paid to the UV index and extra precautions should be taken when it is high.
- 2.2.5 Ensure cold protection strategies are incorporated into outdoor events. Attention should be paid to wind chill conditions and extra precautions should be taken when necessary.
- 2.2.6 Work with the school community to increase and/or maintain shade on school grounds.
- 2.2.7 If an administrator suspects a student is experiencing an adverse health event related to extreme heat or cold temperatures, medical attention for the student should be sought immediately.

3. Responsibilities of Teachers

- 3.1 Incorporate sun, heat and cold protection as well as skin cancer and frostbite prevention into appropriate areas of school curriculum.
- 3.2 Actively promote and model sun and extreme temperature protection prior to and during outdoor activities, sporting events and excursions.
- 3.3 Encourage students to reapply sunscreen 20 to 30 minutes prior to outdoor activities, to wear sunglasses, and to wear a hat which protects their faces, necks and ears whenever they are outside.
- 3.4 In extreme cold, encourage students to wear multiple layers of clothing, boots, hats, and gloves, to cover all exposed skin.
- 3.5 In extreme heat, encourage students to wear light, loose-fitting clothing, to wear sunglasses, hats and to apply sunscreen. Plan for frequent water breaks to ensure that students are adequately hydrated during outdoor physical activity.
- 3.6 Communicate to parents/guardians the importance of supplying their children with suitable clothing, sunglasses, hats, water and sunscreen (e.g. excursion permission forms, letters to parents). (See Form 218 Sample Sunscreen Letter.)
- 3.7 Communicate to parents that, with our winter climate, it is important for students to come to school prepared with clothing which provides adequate protection from very cold temperatures and wind chill factors.
- 3.8 If a teacher suspects a student is experiencing an adverse health event related to extreme heat or cold temperatures, medical attention for the student should be sought immediately.

4. Other Supports

- 4.1 Schools are encouraged to access community partners (e.g., Huron County Health Unit, Perth District Health Unit, Canadian Cancer Society, Environment Canada, Health Canada) as resources to promote sun and extreme temperature safety practices and initiatives.
- 4.2 When planning special outdoor events (e.g. Track and Field, Winter Carnival), ensure that qualified first aid providers are on site, particularly to deal with illness related to hot temperatures.

5. Appendices and References

- Appendix A: Extreme Heat Factsheet
- Appendix B: Extreme Cold Weather Factsheet
- Appendix C: Wind Chill Chart
- Appendix D: UV Index Chart
- Appendix E: Humidex Chart

Environment Canada

<http://www.ec.gc.ca/meteo-weather/>

Health Canada

<http://www.hc-sc.gc.ca/>

Ontario Ministry of Health and Long-term Care

http://www.health.gov.on.ca/en/public/programs/emu/emerg_prep/et_cold.aspx

http://www.health.gov.on.ca/en/public/programs/emu/emerg_prep/et_heat.aspx

Canadian Centre for Occupational Health and Safety

http://www.ccohs.ca/oshanswers/phys_agents/humidex.html

This AP was revised in consultation with personnel representing the Huron County and Perth District Health Units

Extreme Heat

This fact sheet provides basic information only. It must not take the place of medical advice, diagnosis or treatment. Always talk to a health care professional about any health concerns you have, and before you make any changes to your diet, lifestyle or treatment.

Extreme Heat

Many areas in Ontario have experienced unusual and prolonged periods of extreme heat within the last few years. Heat-related deaths and illness are preventable, yet people die due to extreme heat every year. Anyone can suffer heat-related illness when their bodies are unable to compensate and properly cool. It's important to be aware of who is at greatest risk and what actions can be taken to prevent a heat-related illness or death.

Are You at Risk?

During a heat wave, everyone is at risk, but some groups are more vulnerable than others. They include:

- Infants (under 1 year)
- People 65 years of age or older
- People with chronic medical conditions (heart disease, respiratory conditions, diabetes, etc)
- People on certain types of medications (for high blood pressure, depression, insomnia, etc)
- Homeless people
- People with limited mobility
- People with mental impairment
- People who exercise vigorously outdoors (play sports, cyclists, gardeners)
- Outdoor workers (depending upon length or time and exertion levels)¹
- People who work in places where heat is emitted through industrial processes (e.g., foundries, bakeries, dry cleaners)²

¹ Please see the Ministry of Labour's Website located under useful heat-related links for further advice

Health Risks of Extreme Heat

Know When to Get Help

Adverse health effects can occur as a direct result of exposure to excessive heat:

- Heat cramps: symptoms/signs include painful muscular cramps, usually in the legs or abdomen
- Heat exhaustion: symptoms/signs include heavy sweating, weakness, dizziness, nausea, vomiting, fainting.
- Heat stroke: symptoms/signs include headache, dizziness, confusion or other altered mental state, fainting. Skin may be hot and dry, or the individual may be sweating due to high body temperature. This is a medical emergency that can prove fatal!

Increases in other health problems can also be seen, especially for those with other chronic medical conditions such as heart conditions.

Consult a healthcare provider or call Telehealth Ontario (1-866-797-0000 or TTY at 1-877-797-0007) if you experience any of the above symptoms.

² Please see the Ministry of Labour's Website located under useful heat-related links for further advice



Things You Can Do to Protect Yourself

- Check weather network link regarding weather and humidex reports
www.weatheroffice.ec.gc.ca
- Check the Ministry of the Environment link for information regarding smog alerts
<http://www.airqualityontario.com/>.
- Wear light, loose fitting clothes.
- Drink plenty of water or natural fruit juices.
- Avoid beverages such as alcohol, coffee, tea or cola.
- Eat light, cool foods, and try to avoid using the oven or other hot appliances.
- Stay in air conditioned rooms, either at home, at a friend's place, or in public spaces such as malls, libraries, community centres or specially designated facilities.
- If you do not have air conditioning at home, open windows slightly but keep blinds closed during the day on the sunny side of your home.
- Keep indoor lights low or turned off.
- Take cool baths or showers periodically to cool down.
- If outdoors, stay in the shade and avoid strenuous physical activities. Wear sun block and a hat.
- Check up on friends, family and/or neighbours regularly who may be at high risk during a heat event.
- Do not leave people or pets in parked vehicles as they can get very hot!

Source: Ontario Ministry of Health and Long-term Care

http://www.health.gov.on.ca/en/public/programs/emu/emerg_prep/et_heat.aspx

Extreme Cold Weather

This fact sheet provides basic information only. It must not take the place of medical advice, diagnosis or treatment. Always talk to a health care professional about any health concerns you have, and before you make any changes to your diet, lifestyle or treatment.

Extreme Cold

Extreme cold events occur when winter temperatures drop significantly below average for that time of the year. Exposure to cold temperatures, whether indoors or outside, can cause other serious or life-threatening health problems. To keep yourself and your family safe, you should know how to prevent cold-related health problems and what to do if a cold-weather health emergency arises.

Are You at Risk?

During extreme cold weather, everyone is at risk, but some groups are more vulnerable than others. They include:

- Infants (under 1 year)
- People 65 years of age or older
- Homeless People
- Outdoor workers
- Sport enthusiasts (skiers, ice skaters)
- People living in homes that are poorly insulated or without heat
- People living in homes without power (usually due to other weather-related events such as a winter storm).

Health Risks of Extreme Cold

Know When to Get Help

Hypothermia: Symptoms/signs include: shivering, exhaustion, confusion, fumbling/uncoordinated movements, memory loss, slurred speech, drowsiness.

Frostbite: Symptoms/signs include white/grayish skin area, skin that feels unusually firm or waxy, or numbness.

Consult a healthcare provider or call Telehealth Ontario (1-866-797-0000 or TTY at 1-877-797-0007) if you experience any of the above symptoms.

Things You Can Do to Protect Yourself

Prepare for extreme cold events every winter—it's always a possibility in Ontario. There are numerous steps you can take both before and during this type of event:

- Stay in heated buildings as much as possible (your home, friend or family's place, public buildings such as malls, libraries, etc)
- Drink warm fluids but avoid caffeinated or alcoholised beverages, as they cause your body to lose heat more rapidly.
- Dress appropriately when going outside (multiple layers of loose fitting clothes, toques, mittens, etc) and cover up all exposed skin since, in extreme cold, frostbite can occur within minutes.
- Avoid strenuous exercise while out in the cold as much as possible.
- Know the weather forecast, and avoid travelling when extreme weather is predicted.



Source: Ontario Ministry of Health and Long-term Care

http://www.health.gov.on.ca/en/public/programs/emu/emerg_prep/et_cold.aspx

CHARTING THE WIND CHILL FACTOR											
Wind Speed km/h	Actual Thermometer Reading (Celsius)										
	0	-5	-10	-15	-20	-25	-30	-35	-40	-45	-50
	Equivalent Temperatures with Wind chill										
Calm	-2	-5	-10	-15	-20	-25	-30	-35	-40	-45	-50
8	-2	-7	-12	-19	-23	-28	-33	-39	-44	-49	-54
16	-8	-14	-20	-26	-32	-38	-45	-51	-57	-63	-69
24	-11	-18	-25	-32	-38	-45	-52	-59	-65	-72	-79
32	-14	-21	-28	-35	-43	-50	-57	-64	-71	-78	-85
40	-16	-23	-31	-38	-46	-53	-61	-68	-75	-83	-90
48	-17	-25	-33	-40	-48	-56	-63	-71	-79	-86	-94
56	-19	-26	-34	-42	-50	-57	-65	-73	-81	-89	-96
64	-20	-27	-35	-43	-51	-59	-67	-75	-83	-90	-98
LITTLE DANGER (for properly clothed person)	INCREASING DANGER				GREAT DANGER						
	(danger from freezing of exposed flesh)										

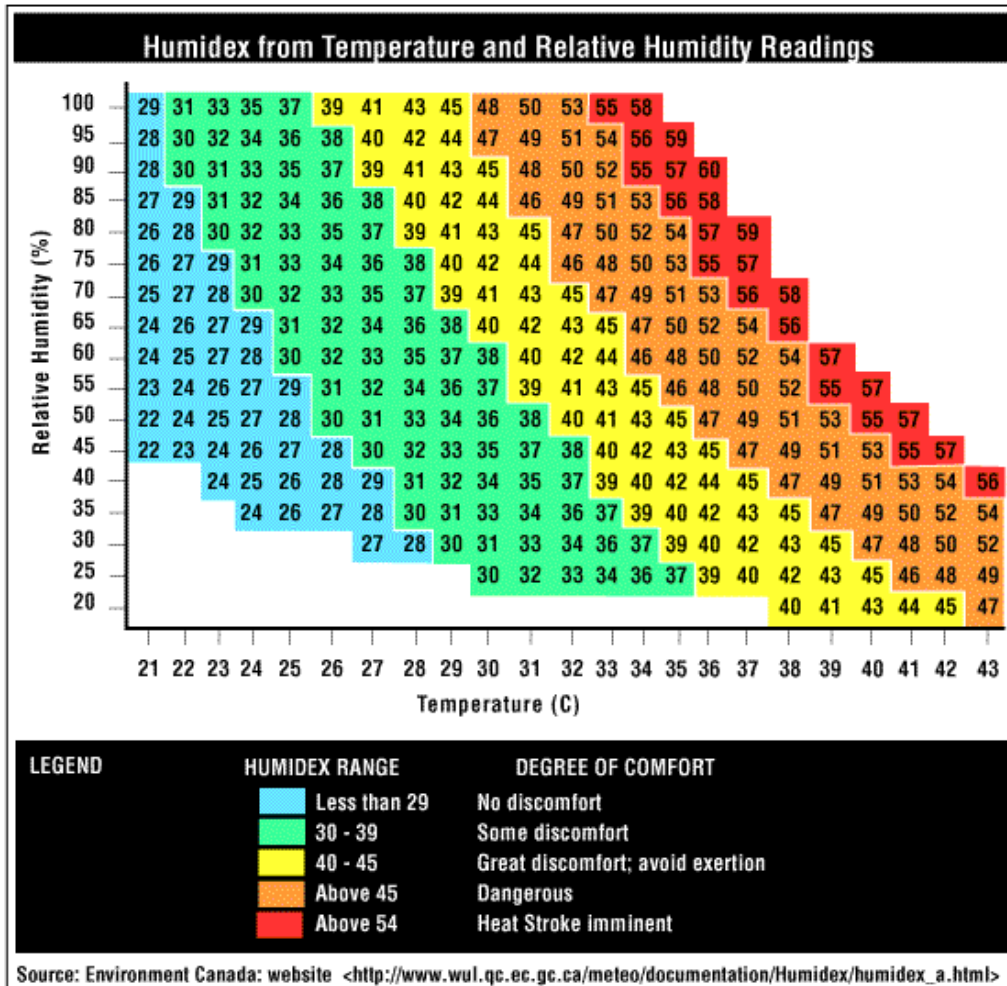
Source: Brand Haldimand Norfolk Catholic DSB, *Cold Weather and Outdoor Play Guidelines*.
http://www1.bhncdsb.ca/sites/default/files/resources/kocs_cold_weather.pdf

In Canada, the UV Index normally ranges from 0 to 10 (it can reach higher values further south), and is also expressed in categories, as follows:

UV Index	Category	Sun Protection Actions
0 - 2	Low	Minimal protection needed if outside for less than one hour. Wear sunglasses on bright days.
3 - 5	Moderate	Cover up, wear a hat, sunglasses and sunscreen if outside for 30 minutes or more.
6 - 7	High	Protection required. Reduce time in the sun between 11 a.m. and 4 p.m. and seek shade, cover up, wear a hat, sunglasses and sunscreen.
8 - 10	Very High	Take full precautions (see "high" category) and avoid the sun between 11 a.m. and 4 p.m.
11+	Extreme	Very rare in Canada. Take full precautions and avoid the sun between 11 a.m. and 4 p.m. Unprotected skin will be damaged and can burn in minutes.

Proper sun protection includes wearing a broad-rimmed hat, a shirt with long sleeves and wrap-around sunglasses or ones with side shields. Choose sunscreen with 15+ SPF (sun protection factor) that offers protection against both UV-A and UV-B rays. Apply generously before going outside and reapply often, especially after swimming or exercise.

Source: Environment Canada Weather Office
<http://www.ec.gc.ca/meteo-weather/>



Source: Canadian Centre for Occupational Health and Safety
http://www.ccohs.ca/oshanswers/phys_agents/humidex.html