

Weather/Environmental Conditions Guideline for Modification of School-Related Activities

Purpose: To protect the health and safety of RISD students and staff while providing and encouraging appropriate physical activities and opportunities. Acknowledging that local weather and environmental conditions are frequently at intensities that may result in negative health consequences, RISD employees shall take the following measures to protect student and staff health and safety.

Students need daily, vigorous exercise. It is not the intent of these guidelines to eliminate physical education or other outdoor programs during or after school, only that certain activities be limited or revised during those times when negative health or safety consequences are most likely to occur.

Responsibility: RISD Administrators, Campus Principals, School Nurses, and Teachers.

I. HOT WEATHER

During times of excessive heat, the following precautions will be taken for all outdoor physical activity including, but not limited to: recess, physical education classes, and/or outdoor field trips.

1. Students should be hydrated *prior* to outdoor activities and drinking water shall be easily accessible.
 2. During extended periods of outdoor activity (>30-35 minutes) periodic drinking should be enforced. **Under no circumstances will access to drinking water be used as punishment or motivation.**
 3. In addition to these precautions, **the campus administrator or designee will assess the anticipated Heat Index and Air Quality (ozone level) for the day and email or announce an activity advisory to all applicable staff.** Steps for assessing the Heat Index and Air Quality (ozone level) can be found on the following pages of these guidelines.
- A. **The Heat Index** is the “feels like” or effective temperature. As relative humidity increases, the air seems warmer because the body is less able to cool itself via evaporation of perspiration. As the index rises, so do the health risks.

Guidelines for determining HEAT INDEX

Temperature and humidity data may be obtained from

1. <http://www.weather.com>. Details specific to the school should be accessed as follows: Enter school zip code; select “Hourly” tab (it is suggested that the site be bookmarked at this point for easy daily access).
2. Because morning temperatures are typically lower than afternoon temperatures, two heat index levels should be determined each day when deciding outdoor activity safety for students.
 - **The first level should be determined based on the highest estimated temperature and corresponding humidity for the AM school hours (8am-11am) using the heat index chart on the next page.**

- The second level should be determined based on the highest estimated temperature and corresponding humidity for the PM school hours (11am-3pm) using the heat index chart below.

✓ In the example below, the numbers used to calculate the heat index would be 85°F and 49% humidity. Based on that information and the chart below, the **PM** heat index for this day would be a level green.

11 am		80°	FEELS LIKE 82°	HUMIDITY: 62%	PRECIP: 0%	WIND: NNE at 8 mph
Show 15 Minute Details						
12 pm		82°	FEELS LIKE 84°	HUMIDITY: 55%	PRECIP: 0%	WIND: NNE at 10 mph
Show 15 Minute Details						
1 pm		84°	FEELS LIKE 85°	HUMIDITY: 51%	PRECIP: 0%	WIND: NNE at 10 mph
Show 15 Minute Details						
2 pm		85°	FEELS LIKE 86°	HUMIDITY: 49%	PRECIP: 0%	WIND: NNE at 10 mph
Show 15 Minute Details						
3 pm		84°	FEELS LIKE 86°	HUMIDITY: 53%	PRECIP: 10%	WIND: NNE at 10 mph

National Weather Service Heat Index Table:

Likelihood of Heat Related Illnesses with Prolonged Exposure or Strenuous Activity

Relative Humidity (%)	80	82	84	86	88	90	92	94	96	98	100	102	104	106	108
40	80	81	83	85	88	91	94	97	101	105	109	114	119	124	130
45	80	82	84	87	89	93	96	100	104	109	114	119	124	130	137
50	81	83	85	88	91	95	99	103	108	113	118	124	131	137	
55	81	84	86	89	93	97	101	106	112	117	124	130	137		
60	82	84	88	91	95	100	105	110	116	123	129	137			
65	82	85	89	93	98	103	108	114	121	128	136				
70	83	86	90	95	100	105	112	119	126	134					
75	84	88	92	97	103	109	116	124	132						
80	84	89	94	100	106	113	121	129							
85	85	90	96	102	110	117	126	135							
90	86	91	98	105	113	122	131								
95	86	93	100	108	117	127									
100	87	95	103	112	121	132									

Temperature (°F)

- Most children may play outdoors and be comfortable. Staff should watch for the child that becomes uncomfortable while playing outdoors. Allow access to water.
- Use caution and closely observe the students for signs of being too hot. Shorten length of outdoor time to 15-20 minutes.
- Elementary students shorten length of outdoor time to 5-10 minutes. Older students may be outdoors for short periods of time, but **ALL staff (Elementary & Secondary) must be vigilant about proper clothing and hydration.**
- No students or staff should be outside unless absolutely necessary, and then for very brief periods of time.

B. Air Quality Index

The **AIR QUALITY INDEX**, or **AQI**, is a scale used to report local **levels of OZONE** and other common pollutants in the air. The higher the AQI value, the greater the health concern. The AQI, shown below, has been divided into levels of health concern and recommended guidelines for each level by the EPA concerning outdoor activity. **The campus administrator or designee will assess the anticipated AQI for the day and email or announce an activity advisory to all applicable staff.**

Guidelines for determining AIR QUALITY INDEX. Local AQI can be obtained from:

1. https://airnow.gov/index.cfm?action=airnow.local_city&cityid=234
2. The National Weather Bureau will provide local forecast and advisories.
3. Call 817-429-2631, and then dial 511.

Air Quality Index Levels of Health Concern	Numerical Value	Meaning
Good (Green)	0-50	Air quality is considered satisfactory, and air pollution poses little or no risk.
Moderate (Yellow)	51-100	Air quality is acceptable; however, for some pollutants there may be a moderate health concern for a very small number of people who are unusually sensitive to air pollution.
Unhealthy for Sensitive Groups (Orange)	101-150	Members of sensitive groups may experience health effects. The general public is not likely to be affected.
Unhealthy (Red)	151-200	Everyone may begin to experience health effects; members of sensitive groups may experience more serious health effects.
Very Unhealthy (Purple)	201-300	Health alert: everyone may experience more serious health effects.
Hazardous (Maroon)	> 300	Health warnings of emergency conditions. The entire population is more likely to be affected.

The following precautions will be taken for all outdoor physical activity including, but not limited to: recess, physical education classes, and/or outdoor field trips-

1. **Orange AQI Alert Days:** Students should not have outside recess or Physical Education classes for periods longer than 10-15 minutes. **The campus administrator or designee will email or announce an activity advisory to all applicable staff.**
2. **Red, Purple, Maroon AQI Alert Days:** Students should not have recess or Physical Education classes outside. **The campus administrator or designee will email or announce an activity advisory to all applicable staff.**

C. Heat-Related Illnesses

Heat Cramps (sudden muscle spasms) usually affect people who sweat a lot during strenuous activity. This sweating depletes the body's salt and moisture. The low salt level in the muscles causes painful cramps. Heat cramps may also be a symptom of heat exhaustion.

Heat Exhaustion is the body's response to an excessive loss of water and salt contained in the sweat.

Heat stroke occurs when the body is unable to regulate its temperature. The body's temperature rises rapidly, the sweating mechanism fails, and the body is unable to cool down. Body temperature may rise to 106°F or higher within 10 to 15 minutes. Heat stroke can cause death or permanent disability if emergency treatment is not provided.

Guidelines for Heat-Related Illnesses

Heat Cramps	Heat Exhaustion	Heat Stroke
<p>Symptoms:</p> <ul style="list-style-type: none"> ▪ Painful muscle cramping usually legs & abdomen ▪ Heavy sweating ▪ Fatigue 	<p>Symptoms:</p> <ul style="list-style-type: none"> ▪ Normal body temperature ▪ Pale and clammy skin, profuse perspiration ▪ Rapid and weak pulse ▪ Tiredness, weakness, headache, nausea ▪ Low blood pressure ▪ Dizziness ▪ Muscle cramps 	<p>Symptoms:</p> <ul style="list-style-type: none"> ▪ High temperature (103° or higher) ▪ Hot, flushed, dry skin, absence of sweating ▪ Rapid and strong pulse ▪ Marked confusion, or may be unconscious ▪ Throbbing headache ▪ Nausea
<p>Steps to Follow:</p> <ol style="list-style-type: none"> 1. Offer cool, clear fluids or a sports drink containing sodium. 2. Provide rest in a cool, shaded place. 3. Firm, gentle massage to area may provide comfort. 4. Notify parent. 5. Do not allow the student to return to strenuous activity for a few hours after the cramps subside, because further exertion may lead to heat exhaustion or heat stroke. 6. Provide health education as appropriate at student's level of understanding, regarding need for sufficient fluid intake and repeated rest breaks during warm weather. 	<p>Steps to Follow:</p> <ol style="list-style-type: none"> 1. Have person lay down in a cool, shaded, quiet place. 2. Loosen clothing. Remove if tight or heavy. 3. Call school nurse. 4. Apply cool, wet cloths or sponge w/ cool water. 5. Give sips of cold water. 6. Notify parent. 7. Call EMS (911) if condition worsens or person shows signs of shock. 	<p>Steps to Follow:</p> <ol style="list-style-type: none"> 1. Call school nurse. 2. Check vital signs, including temperature in summer. 3. Activate EMS/911. 4. Loosen clothing. 5. Position student in a semi-reclining position. If unconscious, roll on side to allow fluids and vomit to drain from mouth. 6. Cool with any immediately available topical mechanism to 102°F. For example, immerse in cool water, or apply ice packs to areas with abundant blood supply (neck, armpits, and groin). 7. Do not give fluids. 8. Notify parent.

II. COLD WEATHER

During times of excessive cold weather, the following precautions will be taken for all outdoor physical activity including, but not limited to: recess, physical education classes, and/or outdoor field trips.

- Teachers and coaching staffs should be aware of the wind chill factor and take appropriate precautions during cold weather.
- If a student does not have adequate warm clothing to participate in the outdoor activity, such clothing should be provided or the student excused from the activity.
- Students should not have recess or Physical Education classes outside when temperature or wind chill factor drops below 36 degrees.
- On days when the temperature is unseasonably cold, outside recess should be restricted to no more than 15 minutes.

Guidelines for determining cold weather conditions. Temperature and humidity data may be obtained from:

1. <http://www.weather.com>. Details specific to the school should be accessed as follows: Enter school zip code; select “Hourly” tab (it is suggested that the site be bookmarked at this point for easy daily access); the lowest estimated temperature and the “feels like temperature” (wind chill) during school hours should be used.
2. Because temperatures in Texas can fluctuate so significantly within a few hours, when determining outdoor activity safety for students, evaluation of cold weather conditions should be assessed for both morning (8am-11am) and afternoon (11am-3pm) school hours.

III. THUNDERSTORMS

The following precautions will be taken for all outdoor physical activity including, but not limited to: recess, physical education classes, and/or outdoor field trips.

Lightning - A study on lightning found that the average distance between one lightning strike hitting the ground and the next was two to three miles. It does not need to be raining for lightning to strike.

- If lightning is seen or thunder is heard, all students and staff shall go inside immediately.
- Outdoor activity can be resumed when the storm has passed and lightning has not been seen nor thunder heard for at least 30 minutes.

Contact Person: Director of Health Services

Cross Reference:

Last Reviewed: August 2018

References:

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American Academy of Pediatrics, Committee on Sports Medicine and Fitness (2000). Climatic heat stress and the exercising child and adolescent. *Pediatrics*, 106, 158-160. Retrieved June 22, 2005 from www.aap.org.

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