



SCHOOL EXPOSURE TO OUTDOOR AIR POLLUTION AGREEMENT

Vision Statement

"Educating global citizens who strive for excellence, live sustainably, lead responsibly, celebrate diversity, and whose integrity champions a just and more peaceful world"

Prem Mission Statement

We are a community that challenges its members to act as compassionate, knowledgeable and principled global citizens: working together for a sustainable future and inspired by meaningful relationships, continuous learning and "good thinking".

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MONITORING AIR POLLUTION

LEVELS:

The Ministry of Natural Resources and Environment - Pollution Control Department (PDC) regional office in Chiang Mai is responsible for monitoring and disseminating to the public the air pollution information/forecast.

Within the school, the Air Quality Index (AQI) and the Particle Matter (PM10 & PM2.5) information is being gathered throughout the day via our on-campus monitoring station. The monitor connects to members of the Prem Exec that allows us to read real-time data and so decisions can be taken to protect students from the adverse effects of air pollution at any time during the day as well as at the weekend. Our website is updated hourly using an average of all previous reading within the last 60 minutes. The air pollution monitor in front of the library will be updated four times per day.

Decisions made regarding the sporting events will be made by the hosting school and the information transmitted via the Athletics Director.

The banding below is created based on the Air Quality Guide for Particle Pollution recommended by the United States Environmental Protection Agency (EPA) using Air Quality Index (AQI) measurements.

REDUCING STUDENT EXPOSURE:

Decisions for reducing exposure to air pollution will be based upon

- individual student risk
- air quality index chart for particulate matter

Students at highest risk i.e. history of known or current respiratory disease, our youngest learners, and those participating in sports or activities which require heavy exertion for extended periods of time will be protected in accordance with this agreement.

All members of the community will have access to information regarding the general level of air pollution in the area. This will be displayed at the front of the library, as well as at the security station at the school entrance, using an arrow to indicate which band the pollution level falls within and a display showing the AQI reading number. Laminated copies of the AQI bands and advice will be posted in all classrooms and offices to provide information to all community members.

These are as follows:

GREEN DAYS (AQI: 0-40 Good)

On Green Days there is no risk to students' health and therefore no action needs to be taken.

YELLOW DAYS (AQI 41-100 Moderate)

On Yellow Days there is little to no risks to students' health. Highly sensitive individuals may be monitored when the air pollution reaches the higher end of this scale and children who are particularly "at risk" may well be treated differently for their own safety.

ORANGE DAYS (AQI: 101 to 150, PM10: 121-235 Unhealthy for Sensitive Groups)

On Orange Days, all teachers will monitor for individual symptoms. Students with a history of reactions to ozone exposure (often 24 hours post exposure) will be assessed at the medical center and encouraged to minimize their exposure via reduced exertion and exposure.

- Consideration will be given to Prem students with a history of reactions having recess times inside.
- Air purifiers will be in use in all learning spaces. The air purifiers will be turned on at 7:30 am by the Housekeepers when the School has stated that it is using the air purifiers.

During this time in the year, we will arrange for air purifiers to be located in the Boarding Clusters at the weekend.

RED DAYS (AQI: 151 to 200, PM10: 236-350 Unhealthy)

On Red Days, the School will limit exposure for all students to one hour at heavy exertion levels. This includes sports that require high-intensity workouts for long periods - basketball, soccer, running and swimming. Potential solutions to limit exposure include but are not limited to:

- The School's recess times will be held inside and all students will be supervised by members of staff.
- All Physical Education classes will be inside
- All training will take place inside or canceled
- Lowering exertion during practice e.g. skill building rather than cardiovascular endurance training.
- Members of the community are advised to wear face masks once the AQI reaches the Red zone (higher than 151). Please consult Ajarn Emma (emmash@ptis.ac.th) for masks that offer appropriate protection
- Air purifiers will be in use in all teaching and learning spaces and will be turned

on at 7:30am by housekeeping.

PURPLE DAYS (AQI: 201 to 300, PM10: 351-420 Very Unhealthy)

On Purple Days all outdoor physical education will be moved indoors. All recess times should also be held inside. The cafeteria will provide Lunch Packs for Junior School students, which will be eaten indoors in the Junior School. Senior School and IEP students will be rotated through the Cafeteria and then sent back to their Homerooms

The auditorium, gymnasium library, drama room, dance studio, and the Junior School Undercroft are appropriate alternative locations that could be utilized for P.E instruction or other substitute activities.

Masks must not be worn during sport as they deplete the amount of oxygen available and promote rebreathing of carbon dioxide.

- Members of the community are advised to wear face masks. Please consult Ajarn Emma (emmash@ptis.ac.th) for masks that offer the appropriate protection. Information is also available in the appendix of this document.

Air purifiers will be in use in all rooms

BROWN/BLACK DAYS (AQI: 301 – 500, PM10 more than 421 Hazardous)

On Brown and Black Days the School will close until the AQI drops below 300. If students are already in school, parents and guardians will be notified that they can come to school to collect their children if they so wish. All students and staff are to leave the campus and return to their homes at the end of the school day. No Exploria or training activities will be offered.

Note: When students and staff are inside for extended periods of time, we reserve the right to cancel all Exploria activities. This decision will be made by the Prem Exec in conjunction with the Activities Director and will be communicated to all transport and families, at least the day before the cancellation. However, the School reserves the right to cancel all such activities on the same day if it is deemed to be in the best interests of the students.

Sources: The US Environmental Protection Agency's scale for rating air quality

Appendix 1: Schools activity chart that is displayed in all classrooms.

AIR QUALITY INDEX (AQI) AND PARTICULATE MATTER (PM10) LEVELS AND ACTIVITY ACTIONS

Activity	AQI 0 – 50 PM10 0 – 40 Good	AQI 51 – 100 PM10 40 – 120 Moderate	AQI 101 – 150 PM10 121-235 Unhealthy for Sensitive Groups	AQI 151 – 200 PM10 236 – 350 Unhealthy	AQI 201 – 300 PM10 351 – 420 Very unhealthy	AQI 301 – 500 PM10 more than 421 Hazardous
Recess (15 minutes)	No restrictions	No restrictions	Make indoor spaces available for children with asthma or other respiratory problems.	Any child who complains of difficult breathing, or who has asthmas or other respiratory problems, should be allowed to play indoors	Avoid outdoor activities for junior and middle school children. Everyone else should avoid prolonged exertion.	Young children should remain indoors and keep activities low. Everyone else should avoid all physical activity outdoors.
PE (1 hour)	No restrictions	No restrictions	Make indoor activity spaces available for children with asthma or other respiratory problems.	Any child who complains of difficult breathing, or who has asthmas or other respiratory problems, should be allowed to play indoors	Avoid outdoor activities for junior and middle school children. Restrict outdoor activities to light – moderate exercise not exceeding 1 hour.	Young children should remain indoors and keep activities low. Everyone else should avoid all physical activity outdoors.
Scheduled Sporting Events	No restrictions	No restrictions	Individuals with asthmas or other respiratory/cardiovascular illness should be medically managing their condition. Increase rest periods and substitutions to lower breathing rate.	Any child who complains of difficult breathing, or who has asthmas or other respiratory problems, should not be allowed to play sports.	Event should be reschedules or relocated	Young children should keep activities low. Everyone else should avoid all physical activity outdoors.
Athletic Practice and Training (2-4 hours)	No restrictions	No restrictions	Individuals with asthmas or other respiratory/cardiovascular illness should be medically managing their condition. Increase rest periods and substitutions to lower breathing rate.	Activities over 2 hours should decrease in intensity and duration. Add rest breaks or substitutions to lower breathing rate.	At high school level rigorous exercise for more than one hour must be rescheduled, moved indoors, or discontinued. At lower levels, this activity should be avoided	Young children should remain indoors and keep activities low. Everyone else should avoid all physical activity outdoors.

SOURCE: USA Environmental Protection Authority, 2009

Appendix 2:

In trying to find a sustainable solution to the use of masks a company with a Bangkok base are selling cloth masks with appropriate, replaceable, filters that are 95% or 99% effective against breathing in PM2.5.

The company, Style Seal, have allowed a representative at the school (Aj. Emma) to provide masks for sale during smoke season.

Company details and product availability can be found at <https://www.style-seal.com/>

Alternatively N95 disposable filters can be bought at most home improvement stores.

Regular medical face masks will not protect against the smoke.