



The health and well-being of our school's children, faculty, and staff are paramount. In light of increasing concerns about air pollution and its impacts, we have revised guidelines to ensure decisive actions when air pollution levels rise, protecting the physical health of children and the mental and emotional well-being of our community.

## Background on Pollution and Health Risks

As awareness of air pollution's impact on health grows, we remain committed to continuously monitoring air quality both indoor and outdoor —particularly PM<sub>2.5</sub>—and taking necessary precautions to protect our students, especially those most vulnerable to poor air conditions.

The Air Quality Index (AQI), developed by the US Environmental Protection Agency (EPA), is a common standard for assessing air quality that you might all be familiar with. While AQI provides a general measure, its calculation [includes multiple levels and types of pollutants](#), which can make it less precise for understanding immediate health risks. PM<sub>2.5</sub>— airborne particulate matter with a diameter of 2.5 micrometers or smaller that penetrates deep into the body—is widely recognized as the most critical factor of air pollution's impact on health.

Due to evolving research and the complexity of [AQI calculations](#), ELC aligned with international schools in China, Southeast Asia, and the US—using guidance from the EPA, WHO, and UNICEF—to refine our air quality practices in accordance with leading global best practice, especially when looking at the impact of air pollution on children. To ensure clarity and focus on the most relevant data, our updated Air Quality Guidelines are now based solely on PM<sub>2.5</sub> levels.

For any questions, please contact [Trevor@elc.ac.th](mailto:Trevor@elc.ac.th)

## Air Quality Plan - ELC International Schools

|                                                                                                                                                           | Level 1                     | Level 2                                       | Level 3                                                                              | Level 4                                                                                                                                                                                                                                                                                                                       | Level 5                                                                                          |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|-----------------------------------------------|--------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|
| PM2.5 Range                                                                                                                                               | 1 -9.1 ug/m <sup>3</sup>    | 9.2 - 35.4 ug/m <sup>3</sup>                  | 35.5 - 55.4 ug/m <sup>3</sup>                                                        | 55.5 - 125.4 ug/m <sup>3</sup>                                                                                                                                                                                                                                                                                                | >125.5 ug/m <sup>3</sup>                                                                         |
| Toddlers (children under 3)                                                                                                                               | Outdoor activity OK for all | Keep a vigilant eye on sensitive individuals* | Maximum 20 minutes outdoors per day                                                  | No outdoor play times                                                                                                                                                                                                                                                                                                         | No outdoor activity. All activities moved indoors                                                |
| Play Times (25-30 min)                                                                                                                                    | Outdoor activity OK for all | Keep a vigilant eye on sensitive individuals* | Sensitive individuals should exercise indoors or avoid strenuous outdoor activities* | No outdoor play times                                                                                                                                                                                                                                                                                                         | No outdoor activity. All activities moved indoors                                                |
| Physical Education (30-45 min)                                                                                                                            | Outdoor activity OK for all | Keep a vigilant eye on sensitive individuals* | Sensitive individuals should exercise indoors or avoid strenuous outdoor activities* | Sensitive individuals should exercise indoors<br><br>Non strenuous, maximum 15 min, outdoors                                                                                                                                                                                                                                  | No outdoor activity. All activities moved indoors                                                |
| Outdoor Activities: Including but not limited to: <ul style="list-style-type: none"> <li>Events</li> <li>Lessons (non-PE)</li> <li>Field trips</li> </ul> | Outdoor activity OK for all | Keep a vigilant eye on sensitive individuals* | Sensitive individuals should exercise indoors or avoid strenuous outdoor activities* | Sensitive individuals remain indoors<br><br>Special considerations made case by case for events and field trips<br><br>Lesson time outdoors <10 min<br><br>Playground (sand area, pitch, swings, basketball court, agora) closed before and after school<br><br><a href="#">Masks</a> highly encouraged for anything outdoors | No outdoor activity. All activities moved indoors<br><br>Events must be rescheduled or relocated |

### Definitions:

**Prolonged exposure:** The duration of prolonged exposure depends upon individual research studies but is often a period of several weeks to several years.

**\*Sensitive groups:** Sensitive groups can include young children, the elderly, pregnant people, or those with underlying heart and lung disease (please see below).

- **Sensitive individuals - Underlying medical conditions:** Parents are encouraged to maintain up-to-date medical records for their children. Although not exhaustive, children with a diagnosis of Asthma, Cystic Fibrosis, Chronic Lung Disease, Arrhythmia, and Cardiac Valve Abnormalities will be grouped into the Sensitive group as indicated above, regardless of age.

**Strenuous activity:** An activity that increases the heart rate to a level typically associated with cardio training/exercise.



## Air Quality Guidelines

### Level 1 | PM<sub>2.5</sub> of 1 - 9.1

At this level, air quality is considered satisfactory. Regular activities can proceed without any restrictions.

### Level 2 | PM<sub>2.5</sub> of 9.2 - 35.4

Individuals with heightened sensitivity may experience discomfort. All scheduled activities will occur as intended, while staff and educators will keep a vigilant eye on those in the sensitive groups category. Our nurse and campus administrators will closely monitor and record respiratory-related concerns through a medical incident report.

### Level 3 | PM<sub>2.5</sub> of 35.5 - 55.4

Vigorous activities will be scaled back whenever possible. Outdoor events may be adjusted to less intense activities with reduced duration. Refer to the accompanying chart for detailed activity adjustments.

### Level 4 | PM<sub>2.5</sub> of 55.5 - 125.4

Outdoor programs will undergo modification, relocation indoors, or possible cancellation. After reviewing the air quality at the intended locale, decisions regarding outdoor excursions will be made. Personnel who must be outdoors will be required to wear N95 masks for their safety.

### Level 5 | PM<sub>2.5</sub> of >125.5

Should the PM<sub>2.5</sub> levels surpass 125.5, all children and school personnel are to stay indoors, barring those essential for maintaining campus security. Personnel who must be outdoors are highly encouraged to wear N95 masks for their safety. Transits between buildings are not restricted under these conditions.



## Air Quality Monitoring Procedures

Our school's air quality is constantly evaluated using a series of particulate matter sensors across our campuses. We rely on the combined average from these sensors to inform our air quality management approach.

Detailed air quality readings are accessible via the following link: [Campus Air Quality Dashboard](#)

## Air Quality Alert Protocol

Our air quality is automatically and continually monitored. Our operations & administrative departments, educational leadership, and physical education staff will be notified if air quality measurements surpass predefined levels.

### Level 3 | PM<sub>2.5</sub> of 35.5 - 55.4

An internal email will be sent indicating the pollutant level. The PE department will be responsible for making necessary adjustments to training regimens.

### Level 4 | PM<sub>2.5</sub> of 55.5 - 125.4

An internal email will be sent indicating the pollutant level and a reminder that all scheduled outdoor playtimes are canceled and the active areas of the playground being closed before and after school. PE classes will be moved indoors, with the possibility of going outside briefly for short non-strenuous activity. The events coordinator will ensure that after-school providers have adequate indoor, air controlled, spaces to maintain safety.

### Level 5 | PM<sub>2.5</sub> of >125.5

When PM<sub>2.5</sub> concentration exceeds 125.5, we will initiate internal emails advising all individuals to cease outdoor activities and stay indoors. A decision on continuing, relocating or cancelling after-school activities will be communicated by 1:00 PM. Parents will be informed immediately through SMS and email if cancellations are necessary.

The decision to downgrade from level 5 to level 4 is contingent upon the 1-hour average PM<sub>2.5</sub> readings and rests with the discretion of the Head of Operations.