

BECAUSE CO₂

IS ONLY PART OF THE STORY



CO₂
Exposure to excessive indoor carbon dioxide will impair learning, engagement and performance. The damaging levels are surprisingly low.



CO₂ – High levels (from 1,000 parts per million) of CO₂ will affect concentration, behaviour and more.

Fine Dust (PM_{2.5})
Micro-particulates can travel into children's lungs, triggering health problems that also impact on attendance and performance.



Should be as low as possible. A particular problem with open windows near busy roads.

Chemicals (TVOCs)
Beyond the impact on wellbeing, research confirms that airborne pollution significantly damages learners' academic progress.




TVOCs should be as low as possible. COVID cleaning is a particular TVOC problem.

Temperature
Outside the range below, performance drops in a straight line.




Optimum Learning range is 18 - 21°C. Schools might review clothing policies in light of this.

Humidity
High humidity brings risks like toxic mould spores. Low humidity brings dehydration.




Staying between 40 - 60% also helps noses to filter viruses.

Ambient Light (Lux)
Children learn less well when light levels are low, and behaviour also suffers. There is an equity issue too, when light levels are uneven across a room.



Lux levels should be as high as possible. Below 500 lux and students are sleepy, not engaged and perform badly.

Ambient Noise (dBA)
Noisy rooms obstruct children's ability to concentrate and perform, wherever they are.



Above 72 decibels starts to be disruptive. Rapid noise rhythms are also a problem.