

# THINK ABOUT THE LINK

## WHOLE CHILD



ACADEMIC • SOCIAL • EMOTIONAL • PHYSICAL • BEHAVIORAL

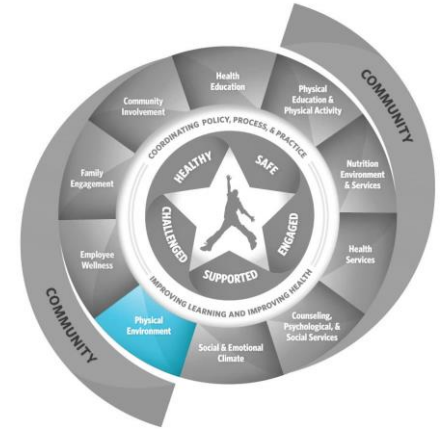


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## SAFE ENVIRONMENT: Evidence-Informed Practice Brief WHAT DO WE MEAN?

*Physical Environment (aka Safe Environment)* describes the school building and physical space around the school, school grounds, and the land on which the school is built.<sup>2</sup> Safe environment includes both the physical environment of the school and procedures for maintaining the safety of students and staff.

The physical environment includes factors such as lighting, ventilation, air quality, and temperature during normal operating hours and during times of construction or renovation. The U.S. Environmental Protection Agency<sup>27</sup> outlines five major components of a comprehensive school environmental health program which align with the [WSCC's](#) definition of the physical environment.



1. Use effective cleaning and maintenance practices to ensure that district buildings and equipment are clean and safe for students and staff to use.
2. Prevent mold in school buildings through control of moisture and dampness in school structures.
3. Protect students and staff from exposure to toxins in school buildings and on school grounds including mold, lead, air pollution, pesticides, and chemicals in cleaning products.
4. Address and improve air quality and ventilation on district buildings and grounds; this includes ensuring access to fresh air along with minimizing exposure to toxins in the air such as vehicle exhaust from vehicle traffic near the school.
5. Establish a comprehensive pest management program while simultaneously limiting student and staff exposure to harmful pesticides.

In addition to preventing and responding to environmental health, a safe environment also considers other threats to the school environment including violence, accidents, disease outbreaks, and other emergencies. Therefore, an essential component to the school physical environment is establishing a comprehensive school safety plan which includes physical and psychological safety measures, crisis plans, and school safety response teams.<sup>3</sup> Physical safety is focused on the physical structures of the school environment, which include natural access control (i.e., locked doors) and surveillance (i.e., security cameras).<sup>6</sup> Psychological safety measures focus on the well-being of students and staff by promoting school climate and connectedness.<sup>28</sup> The development of school safety teams requires collaboration between school personnel, emergency responders, and community resources. Crisis plans include protocols and procedures for the school crisis team and delineated roles and responsibilities of how to respond effectively.<sup>25</sup>



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# WHY IS IT RELEVANT TO CHILD OUTCOMES?

## Physical Health Outcomes

The school environment is associated with a variety of physical health outcomes. Exposure to toxins, pollutants, chemicals, or poor water quality while at school can affect the development and growth of bone, muscle, and other organs during childhood and adolescence.<sup>27</sup> Despite regulations and recommendations, previous research has documented that some schools do not meet these environmental standards. For example, one study evaluating air quality in California elementary classrooms found that over half of the classrooms sampled did not meet the state standards for ventilation.<sup>20</sup> This is important, as connections have been found between indoor air quality and coughing, wheezing, lung inflammation, and asthma.<sup>1</sup> In addition, the physical structures available in the school environment may also affect physical activity, which may, in turn, impact physical health outcomes. Additional research has documented positive relationships between features of the area around the school—such as green spaces, sidewalks, crosswalks, and bike lanes—and the increased use of walking or biking to school.<sup>7,16, 19</sup>

## Social, Emotional, and Behavioral Outcomes

Previous research has documented interactions between aspects of the school physical environment and student outcomes. For example, a relationship between school climate and physical environment has been documented—specifically, school climate was found to alter the relationship between school facilities and student academic outcomes.<sup>26</sup> Features such as access to green space contribute to overall well-being.<sup>19</sup> Another component of the school physical environment is school safety and protecting students and staff from threats. Given that crisis events (e.g., shootings, natural disasters) are associated with increases in psychological distress and decreases in sense of psychological safety,<sup>17</sup> the development of a school safety team and a comprehensive crisis response plan may help to promote student and staff feelings of psychological safety and improve outcomes in the event a crisis occurs.

## Academic Outcomes

There is a relationship between the school physical environment and academic outcomes. For example, the school environment may affect physical health by causing or exacerbating illness (e.g., through poor indoor air quality or ventilation).<sup>15</sup> This may lead to an increase in absences and missing academic content, which can affect attention, ability to focus, and academic achievement.<sup>12,19,20,21</sup> Although these relationships may be influenced by poor environmental health across child-influencing systems (school, community, home),<sup>21</sup> previous studies have documented that classrooms may not meet environmental standards.<sup>20</sup>



## CREATING SAFE SCHOOL ENVIRONMENTS: EVIDENCE IN ACTION

The strategies provided here summarize a review of available evidence and best practice recommendations in this domain.\* Strategies are grouped by anticipated resource demand (e.g., funding, time, space, training, materials).

### Level 1: Low resource demand

#### Improve air quality

- Outdoor air quality can be improved by reducing exposure to vehicle exhaust, such as through implementation of a no-idling policy on school grounds or by partnering with community stakeholders to reduce idling of cars near school grounds.<sup>8,18</sup>
- Indoor air quality can be addressed through increasing ventilation, ensuring adequate air flow, and increasing access to fresh air (e.g., opening windows).<sup>15,20,27</sup>

#### Promote student and staff involvement in the physical environment

- Schools can urge members of the school community to improve and maintain the physical environment.<sup>11</sup>
- Examples may include encouraging students and staff to keep shared spaces clean, engaging in recycling programs, preventing graffiti and other damage to school property, and offering extracurricular and volunteer activities related to environmental health (e.g., gardening and maintaining green spaces).<sup>19,27</sup>

### Level 2: Moderate resource demand

#### Change seating options

- Relationships exist between improvements in seating options and improved posture<sup>5</sup> and decreased sedentary behavior.<sup>22</sup>
- Factors such as seat height, slope of desk, lumbar support, adjustability, and access to standing desks can be considered when selecting seating options.<sup>5, 22</sup>

#### Create a school safety team

- A comprehensive school safety team should include a variety of stakeholders (e.g., families, community members, first responders).<sup>3</sup>
- Schools should develop and practice crisis prevention and response plans with all stakeholders.

### Level 3: High resource demand

#### Monitor and respond to the indoor physical environment

- Despite environmental standards and recommendations, schools may not meet expectations for air quality,<sup>20</sup> water quality,<sup>14</sup> and ventilation.<sup>13</sup>
- Schools can take steps to regularly monitor aspects of the physical environment (e.g., presence of mold or moisture, air and water quality, temperature, humidity) and create a response plan to address concerns.<sup>15</sup>

#### Change playground designs and promote access to green space

- Previous research has documented increased physical activity resulting from a multi-component recess intervention, including playground markings (for games and other activities), physical structures, and access to green space.<sup>4,9,19</sup>
- Playground activities and equipment should include options that match the preferences and developmental level of students in each grade level to encourage participation in recess activities and physical activity.
- Access to green space (e.g., through natural outdoor experiences and school gardening programs) has been shown to benefit student health and well-being.<sup>19,24</sup>

#### Consider appropriate use of school resource officers (SROs)

- Evidence suggests that the presence of SROs may be associated with increased use of exclusionary discipline (e.g., suspension, seclusion, restraint).<sup>10</sup> Regularly review disaggregated discipline data to examine patterns and address disparities.<sup>23</sup>
- If choosing to have SROs, school leaders must invest in rigorous training and guidelines that define the appropriate roles of SROs.<sup>23</sup> SROs should be included in staff training in positive behavior, cultural competence and humility, and related topics.

\*For more information about the systematic review process used to identify evidence-based practices, please refer to our overview brief which can be found [here](#).



## ADDITIONAL RESOURCES

Note: The [WellSAT WSCC](#) allows users to evaluate district policy alignment with 'best practices' in policy associated with Safe Environment and other WSCC model domains.

### ***Environmental Law Institute***

[Topics in School Environmental Health:](#)

#### Overview of State Laws

This 2017 document provides a review of state laws related to school environmental health including mold, vehicle idling, building ventilation and other topics.

### ***Healthy Schools Campaign***

[Environment Resources](#)

This webpage provides a hub for resources related to school environments, including access to green space and guidance for energy savings.

[Healthy Green Schools & Colleges](#)

This webpage provides resources and tools for schools to use in preparing for green cleaning.

### ***National Association of School Psychologists***

[A Framework for Safe and Successful Schools](#)

This 2015 framework, jointly created by multiple organizations with representation from a variety of stakeholders, provides evidence-based practices for promoting school safety.

[PREPaRE Training Curriculum](#)

The 2016 PREPaRE curriculum includes materials and information about training options for school crisis prevention and intervention.

[School Safety and Crisis Webpage](#)

This webpage includes multiple resources related to preventing and responding to school crisis events tailored to different audiences including parents, teachers, and administrators.

### ***Readiness and Emergency Management for Schools (REMS) Technical Assistance Center***

[Guide for Developing High-Quality School Emergency Operations Plans](#)

This website provides detailed guidance related to developing school-based emergency preparedness and response plans.

### ***U.S. Environmental Protection Agency Clean School Bus***

This website includes information and resources related to reducing exposure to vehicle exhaust on school grounds.

[Sensible Steps to Healthier School Environments](#)

This document identifies common environmental health concerns and steps school leadership can take to respond; also includes an assessment to evaluate current facilities and operations.

[State School Environmental Health Guidelines](#)

This guide includes tiered recommendations for implementation of each of the five components of a school environmental health program.



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