Sick schools are curable

ET Staff

Any way you look at it students and teachers spend a lot of time in school, it's enough to make you sick, not just sick in a figurative sense but sick literally.

In the six or seven hours spent in school every day, staff and students might be exposed to toxins in the paint on the walls, the material in the furniture, impurities in the carpet, nasties in adhesives, all of which combine to make for a pretty heavy toxic payload.

Children also metabolise faster than adults, which means they breathe more and so, logically, are ingesting a larger amount of gunk. Children also touch everything, more so than adults, and what has been touched usually ends up to greater or lesser degrees in the mouth.

What's more scary is how little real research has gone into sick school buildings; it's known that there is a problem with toxicity in schools but very little is known about how much of this there is and where it is located.

Air indoors can be far more laden with toxins than the air outside

Dr Shaila Divakarla, the Standards and Technical Manager from GECA (Good Environmental Choice Australia) says; "There is quite a lot of material available on the topic regarding corporate spaces. These premises are rented out and so are subject to ongoing scrutiny and research, there isn't that pressure or the funding available to do the same in the schools space."

Paints, adhesives, cleaning products, flooring or upholstery can emit volatile organic compounds (VOCs), depending on how they've been manufactured or what materials have been used in each product. VOCs include stuff like formaldehyde, and can easily vaporise into the surrounding air. They can trigger a range of symptoms, including respiratory irritation and headaches, with asthma sufferers particularly vulnerable.

"Air indoors can be far more laden with toxins than the air outside, in some cases orders of magnitude higher.

"The consequences range from mild to severe, from tiredness, skin irritations and coughing at one end of the spectrum right through to cancer on the other. These compounds can have an effect on the cardiovascular and nervous systems

which is worse in schools as students are still in their developmental years," Dr Divakarla says.

It's also true that the drive towards energy efficiency is a confounding factor, Tight buildings which look to contain as much of the heat and energy a building produces also lock the air breathed into a closed system, there is no opportunity for the toxic stuff to be ventilated.

Toxins fall under either the biological or chemical heading. Bio toxins might consist of dust or pollen while the chemical toxins can derive from modern chemicals used in building materials, the furnishings, art and craft supplies and cleaning products.

Dr Divakarla says that one of the best ways to work out whether you might have a problem with environmental toxins is to observe the staff and students.

"Some indicators might be constant coughing, headaches and dizziness. It's hard to know whether there are toxins in a building though as these symptoms might not present in every case.

"There is no one size fits all solution, an approach has to be tailored to the particular situation. You must seek to eliminate the toxic material, ventilate all areas and separate and isolate toxic areas," she says.

There are many things that can be done to fight toxicity, it might be as simple as improving your housekeeping, making sure the carpet has been cleaned, keeping your eye on waste management so flies and germs don't show up (which would otherwise require harsh pest control chemicals) or checking the ingredients of new cleaning products.

"A simple and relatively inexpensive step that could be enacted in schools is installing fixed vents to the eaves (portion of roof that overhangs the wall) of the building. They are an easy way to get some passive ventilation going in the roof space to prevent the build up of mould and can be retro fitted to older buildings," Dr Divakarla says.

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An experiment into the effects of toxic areas was made in a legal office – savour the thought – on Collins Street in Melbourne and yielded some telling results. After moving into a refurbished space with a 5 Green Star rating by the Green Building Council of Australia the experiment looked to discover the impact of the cleaner greener space.

The results showed that cases of sick leave decreased by 39 per cent and typing speed increased by nine per cent. Despite a 12 per cent reduction in average hours worked each month, there was a seven per cent increase in the billings ratio for the lawyers, suggesting that they were being more productive with their time on the job.

The study also found improvements to overall health, reporting significant reductions in the frequency of headaches, colds, sore eyes, fatigue and flagging concentration levels. While this study relates to a workplace environment, it would be fair to say similar results could be seen in a classroom full of students as well.

It can be challenging trying to find the safest and most environmentally-preferable products for the classroom, since it's so difficult to verify what's been used in a product's manufacture, or how it was made. The easiest way to select safer furniture, paints, flooring or textiles is to look for evidence of independent third-party certification in the form of an ecolabel, such as the scheme run by GECA.

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Resene Paints

Resene has an extensive range of Environmental Choice approved VOC free paints which is good news for anyone that has an eye on the levels of toxicity in their environment, including schools.

The company's low VOC range has been available in New Zealand for years and backed by an extensive customer service program is making headway in Australia.

There's a number of low VOC paints available to suit; Resene CoolColour combines low VOC technology and a reflective finish that keeps buildings cooler.

Resene Kitchen and Bathroom low VOC paints are formulated with anti-bacterial silver and MoulDefender to inhibit bacteria and mould growth.

Resene Zylone Sheen VOC Free and Resene Non VOC tinters enable you to achieve a VOC free finish on interior walls in a vast number of colours and tints.

Another product that's great for schools is Resene Write-on Wall Paint, which leaves a clear whiteboard-style finish that you can apply over your existing paintwork to turn it into a coloured whiteboard. Students can then write all over the wall without damaging the paint.

The company has a strong involvement in education, running the Resene Mural Masterpieces competition for schools yearly in New Zealand and is looking to grow the competition in Australia. It's also a showcase for what can be achieved with Resene products – it's worth a look at www.resene.com.au/murals the winner's, Apanui Primary School, submission is of an incredible standard.

Resene's technical and colour consultants will provide whatever level of assistance is required at any stage of the process, it is up to the customer. For those specifying Resene products on commercial work, the company's services are free.

So there's no unexpected results Resene's computerised colour rendering service, Resene RenderRite, lets you 'see' the finish before the painting has even started.