

The COVID-aware classroom: Why environment and storage matter

Ask any teacher or technician what Gratnells does and most will say ‘the school tray’. Indeed, the Gratnells name is synonymous with school storage solutions across the UK and internationally. However, back in May of this year, we wrote about how not many people know that the company has been producing a line of storage furniture under the Gratnells Medical banner for about 40 years. At the time, with Covid infection rates still high, some of our educational furniture had been made available to the health and social care sectors with the same antimicrobial additive used in our medical range.



The BioCote® antimicrobial additive is proven to be effective in combating surface contamination from a wide range of bacteria, fungi and viruses. In a comparative study some years ago, BioCote created an antimicrobial classroom, using Gratnells antimicrobial trays as the storage element. Over the course of an academic year, the results of the study were extraordinary. In the antimicrobial classroom, there was a 96% reduction in surface bacteria present compared to the standard classroom and a 20% decrease in absenteeism related to ill health.

With this in mind, Gratnells has added antimicrobial protection into a range of its popular classroom storage furniture. The addition of antimicrobial protection helps to maintain a more hygienic surface between normal cleaning routines and the new range has been designed to help keep classroom layouts as flexible as possible.



Callero Shield covers the popular Callero storage trolleys and trays that are perfect for deployment of resources in a Covid-aware classroom. Double- and treble-width trolleys can be loaded with resources in a central location and moved to where they are needed, thanks to their manoeuvrability. In the classroom, they are much more flexible compared to fixed storage units. They can be moved to create zones or breakout areas and, if space is at a premium, their small footprint means that they can be placed flush against a wall in the classroom or even temporarily in the corridor, if safe to do so. The Callero units offer high-density storage, good for resources for different lessons or groups. Resources can also be stored in preparation for different ‘bubbles’ to use during the school day.

Many schools are now opting to give each child a personal tray in which to store their own belongings. This further reduces the risk of cross-contamination that can come from coats and bags being stored in cloakrooms. It also eliminates children congregating together in the cloakroom area at the start and end of the school day and at break time. The four standard sizes of Gratnells trays are now available with antimicrobial protection in both translucent and kiwi green tinted versions.

To complement new tray options, the newly launched SortED tray inserts also come with antimicrobial protection. These inserts work with both shallow and deep trays and are perfect for organising resources that may be shared between individual students or groups. SortED inserts can support extra hygiene measures being put into place as they can be cleaned safely in the dishwasher at the end of the day to further reduce cross-contamination. To

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complement Callero Shield and antimicrobial trays, the range also includes high-density, mobile storage frames, and PowerTray, a multiple USB device charger.

Of course, it's not only the flexible storage furniture options that are important in the Covid-aware classroom. The learning environment matters too. Professor Stephen Heppell is an expert in improving the learning environment by making small changes to common environmental factors such as temperature, light and carbon dioxide. In a recent blog post, he says that his research has helped many schools to drop their CO₂ levels to below 1,000 parts per million – the level at which cognitive performance can start to become compromised. To help combat high CO₂ levels, Professor Heppell is a strong advocate of Bring Your Own Plant (BYOP) projects. These have shown that dramatic drops in CO₂ levels in the classroom are possible. Incidences of ADHD fall, whilst academic performance and engagement climb.

The Gratnells plant tower is an innovative way of keeping plants within the classroom environment, but in a safe and interchangeable way. The tower allows for several tiers of plants to be grown in a minimal footprint of 370mm x 420mm. It provides for an optimal use of space and a good concentration of plants. Being mobile, it can also be moved to different areas within the learning space depending on the conditions. Using these plant towers in a primary setting can support children's learning and understanding of how plants grow during the academic year and the conditions they require. When used as part of a STEM project within classrooms, the assembly of the tower, and the preparation of the trays, including drilling, plant selection and planting, can all be an instructional part of the learning process.



Professor Heppell and his research team say that they have found many classrooms with CO₂ levels over 5,000 ppm and that seeing lower CO₂ is often a function of excellent ventilation. He says, *'With World Health Organisation Covid research implicating the dangers of coronavirus being spread through the air in crowded indoor spaces with poor ventilation, that ventilation becomes dramatically more important.'*

'CO₂ levels are a good marker for better and more effective ventilation. If you are looking to justify greater outdoor learning as you try to distance children in the limited indoor space available, the Learnometer gives a very clear score and justification'.

Jointly developed by Gratnells and Professor Heppell with his team, Learnometers constantly monitor environmental conditions in the classroom and store that data in the cloud.

Historical data can be accessed through the Learnometer dashboard, enabling teachers to compare readings over time and make better-informed decisions about possible improvements.

Learnometer devices measure temperature, humidity, CO₂, TVOCs (chemicals), PM2.5 (fine dust), light and noise. The resulting data can also be used in myriad ways as a springboard for STEM projects in schools.



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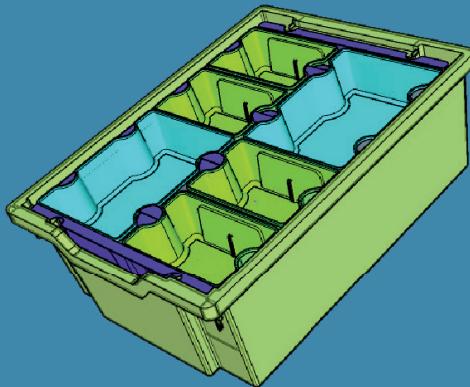
Case study

Gratnells SortED tray inserts help fight surface contamination at Trumpington Park Primary

Trumpington Park is a new-build primary school located to the south of Cambridge city centre. Like all schools in the first half of 2020, it has had to adapt to different ways of working and of welcoming pupils into the classroom.

At a glance:

- Trumpington Park Primary, Cambridge
- Covid aware classroom planning
- Desk, tray and chair approach
- Gratnells trays with antimicrobial protection against bacteria, fungi and viruses
- Biocote additive reduces surface contamination by up to 99.99%
- Gratnells SortED tray inserts chosen to aid teaching and learning
- Antimicrobial additive gives extra layer of protection when sharing of resources is difficult to control



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Like many schools, Trumpington Park stayed open throughout the lockdown to accommodate children of key workers and, coming up to the end of the summer term, started to see other children return as the government encouraged wider attendance. However, social distancing measures, class bubbles, anxiety about being in class and worries about cross-contamination are unfortunately part of the new norm.

The events of the last few months have, in some respects, helped school managers better prepare for the times ahead. In some classes, the school has adopted a system reflecting Gratnells' recipe for return with each child allocated their own desk, chair and an antimicrobial desk resource tray. In addition, each child has a floor tray for personal effects such as coats and bags to reduce the possibility of them mixing in communal areas such as cloakrooms.



Going a step further in the fight against surface contamination, in June 2020 the school introduced Gratnells SortED tray inserts into its classrooms. These are designed to divide a tray from two to eight sections and provide a way to deploy resources more easily. Manufactured to work perfectly with Gratnells school storage trays, each child has immediate access to clearly separated resources within their own desk tray. Crucially, this reduces the temptation or impulse to share and creates a barrier to cross-contamination.

The brightly coloured inserts, like the desk tray, have the added benefit of an antimicrobial additive. This reduces surface contamination between usual cleaning routines. The additive is effective for the lifetime of the product against a variety of bacteria, fungi and viruses. It provides another layer of protection where the sharing of resources can be difficult to control, especially in early years and primary classes.

Children at Trumpington Park are now regularly using SortED inserts and they are proving popular for maths manipulatives and storing all manner of resources for art classes. The inserts can be easily wiped clean, washed in hot soapy water or indeed the dishwasher. At Trumpington Park, where the inserts are also used during outdoor sessions in Forest School, this easy-to-clean feature is a real plus.

Charlotte Leaver, Assistant Headteacher, said, '*The use of the SortED inserts has supported us with our preparation, organisation with resources and developing independence in our children. Children were already used to using their individual trays to support learning but by using the SortED inserts they have been able to access a wider range of resources. We have been using the SortED inserts across the curriculum to support with teaching. In EYFS they have been used mainly to support with maths, holding counting resources, and children in Year 1 (age 5-6) have been using the SortED trays to support their learning in Forest School and in science with identifying and classifying materials'.*