

BUILDINGS

inside out

autumn 2016

NOT ROCKET SCIENCE

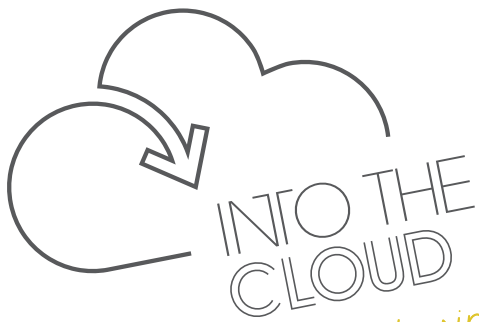
When it comes to kitting out a new science lab, which designs best meet teacher and pupil needs?

+ **Train to win** // Expert insight on what the latest school gym facilities now offer

+ **Nouveau nostalgia** // How one school's makeover perfectly coincided with its 60th anniversary

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Welcome

We can't quite believe we're already on the third instalment of *Buildings: Inside Out* – time really does fly when you're learning all about innovative new building design! This month, as another school year dawns, we're offering top tips, tangible advice from those in the know and, of course, beautiful design ideas.

To start things off, we hear from former head Gill Kelly, author of *Where will I do my pineapples?*, a book charting her experiences of building a whole new secondary school. On page four she shares lessons learnt and explains how a building project can be the stimulus needed to raise standards in the classroom.

For those of you whose idea of DIY involves an afternoon in Ikea, we've dedicated a couple of features to attractive interiors, discovering in the process that even science laboratories can be pretty. Emily Hardy finds that the science labs of yesteryear have been replaced with shiny, clean, colourful spaces complete with the slickest equipment around. As she sagely observes: "Science lessons now contain more technology, more data and more explosions than we could have dreamed of" – turn to page 20 to find out about the key considerations to bear in mind when kitting out a brand spanking new laboratory.

Elsewhere, we find out about a school's legal obligation with regard to safeguarding checks on contractors (p6) and learn how shelters and canopies can transform your outdoor areas (p18). Enjoy!

***From the Buildings:
Inside/Out Team***

Insight

04 // TOP TIPS

Ten things to bear in mind when leading a school building project, according to Gill Kelly

06 // LEGAL

Expert advice on safeguarding checks on contractors

Spotlight on

08 // SECONDARY

How the completion of Withernsea High School's new building coincided perfectly with the school's 60th anniversary

10 // STATE BOARDING

Brymore School's beautiful new dining facility and the lessons learnt during design and build

Bricks and mortar

14 // PHYSICAL EDUCATION

We take a look at what the latest gym facilities have to offer

18 // SHELTERS AND CANOPIES

How can innovative design transform the look and feel of your school's outdoor spaces?

Interiors

20 // LIGHTING

The latest trends in indoor and outdoor lighting

22 // LABORATORIES

Which lab designs best meet teachers' and pupils' needs and how much should you be looking to spend?

Having built her own secondary school back in 2009, former secondary academy principal GILL KELLY knows what it takes to successfully lead on a big building project. Here, she offers her top tips for those at the helm of similar site developments

BUILDING ON UP




Back in 2009 I was deputy head of Nailsea School in north Somerset and I'd just played an integral part in opening the doors of a £32m new school build project

as part of the Labour government's Building Schools for the Future (BSF) programme.

In September 2010, my book *Where will I do my pineapples? The little book of building a whole new school* was published – six months after the new secretary of state for education Michael Gove cancelled the programme.

But reading it again, I'm pleased to say that the same principles remain true for school leaders building new schools or parts of schools today. Back then we had an incredible opportunity to transform learning and we took it seriously. If you're fortunate enough to have the same chance, grab it with both hands and take advice from people who've been through it.

START WITH A CLEAR VISION OF WHAT LEARNING SHOULD BE LIKE RATHER THAN WHAT IT'S CURRENTLY LIKE

- Do have a clear vision of 21st century learning that's owned by all. Make time to consult and involve all stakeholders; it pays dividends in the long run.
- Don't let the 19th century model of education restrict your imagination, and instead of thinking of structures, think of activities! Start from blue (or pink) skies and if you can't think it, dream it.

REMEMBER WHO YOU'RE DOING THIS FOR

- Your current and future students deserve the very best learning environment, and one which reflects the value of an excellent education. There are many more reasons to 'play safe' than there are to be adventurous, but always try and be brave when it comes to building design.
- Do have the courage to keep your learning vision at the heart of every decision you make or that you allow others to make.
- Don't let the nay-sayers take over. You'll be confronted with restrictive formulae for building schools or parts of schools and there will be lots of voices telling you what you can't do. Hold your nerve.

BUILD CAPACITY WITHIN YOUR LEADERSHIP TEAM AT AN EARLY STAGE

- Do make time to look after yourself and the senior team, adjust responsibilities and build capacity to absorb the extra workload.
- Don't let the pressures of a big building project overwhelm you or assume that the SLT structure can stay the same. Take time out to re-focus minds, re-establish communications, re-charge batteries and fire up creativity.

EXPECT TO FEEL OUT OF YOUR COMFORT ZONE

- Do get used to the feeling of being 'comfortable with feeling uncomfortable'.
- Don't feel like you have to know all the answers and don't assume that everyone knows what they're doing! When it feels like there's no light at the end of the tunnel and staff and governors are getting cold feet, strong leadership is needed.



ASK THE RIGHT QUESTIONS

- Do ask, 'What do I want the ICT to do?', 'What experiences do I want students to have?' and 'What should learning look like in an ideal world?'
- Don't ask yourself, 'What kind of ICT do I want?', 'What sort of building do I want?' and 'What do others have?' Don't accept 'off-the-shelf' solutions if they're not right for your school.

KEEP THE THINKING JOINED UP!

- It's easy to separate the ICT from the building and the educational vision. Your role is to make sure that everyone's talking your language and sharing your educational vision.
- Do see ICT as a powerful agent of change with the ability to transform learning and engage and facilitate the change management process.
- Don't see the ICT aspect as just hardware and software, wiring and RJ45s (and if you don't know what an RJ45 is you will soon!)

USE THE STIMULUS OF THE PROJECT TO RAISE STANDARDS NOW

- It's not the new building that will raise standards; it's the change in working practices.
- Do see your new building as a chance to bring a sharp focus to learning and standards and drive through positive changes.
- Don't see the project as additional to and separate from the day job. In the months prior to moving in to the new school or classroom, redesign the curriculum to maximise the new resources you have. Focus on the vision for learning that you've developed and use the process to bring all staff on board.

MAINTAIN OPEN LINES OF COMMUNICATION

- Do get key messages out to staff and students on a regular basis to involve them in the process. Communication lines need to be crystal clear.
- Don't keep developments to yourself in an attempt to protect staff and students from the ups and downs of the project.

Regular drop-in sessions and stakeholder community events will ensure a shared sense of ownership.

APPRECIATE THE HUMAN ELEMENT

- Remember that change entails anxiety, fear, anger and irrationality on behalf of staff, students, parents and governors.
- Do listen, talk to and reassure your staff.
- Don't assume that what they say they're worried about is what they're really afraid of. The biggest fear they'll have is about changes in working practices.

ENJOY THE RIDE

- To be chosen to lead a project on this scale is a great honour and privilege as well as a great responsibility. But if you get it right, the first week in your new building will be the best you'll ever have. ■

Gill Kelly is a consultant headteacher at Eos Education and also runs her own educational consultancy service (www.gillkelly.com)

There are many more reasons to 'play safe' than to be adventurous but always try and be brave



KEEPING CHECK



There's an awful lot to think about when it comes to overseeing a school building project – not least the safety of staff and students whilst contractors are on site. **CHRISTINA SLEDMORE** explores a school's legal obligations in relation to safeguarding checks on contractors

Earlier this year the Department for Education published its revised statutory guidance *Keeping Children Safe in Education* (KCSIE). This guidance replaces the 2014 publication of the same name and enhances the current statutory obligations on schools in respect of their contractors.

THE OBLIGATIONS

The update to the 'contractors' section of KCSIE clarifies the DBS checking procedures in regard to regulated activities, specifically:

91.

Schools and colleges should ensure that any contractor, or any employee of the contractor, who is to work at the school or college has been subject to the appropriate level of DBS check. Contractors engaging in regulated activity will require an enhanced DBS certificate (including barred list information). For all other contractors who aren't engaging in regulated activity, but whose work provides them with an opportunity for regular contact with children, an enhanced DBS check (not including barred list information) will be required. In considering whether the contact is regular, it's irrelevant whether the contractor works on a single site or across a number of sites.

92.

Under no circumstances should a contractor in respect of whom no checks have been

obtained be allowed to work unsupervised, or engage in regulated activity. Schools and colleges are responsible for determining the appropriate level of supervision depending on the circumstances.

The key is to therefore consider the activity to be performed by the contractor and associated potential for unsupervised contact with children or vulnerable adults on a regular basis.

MAKE CHILDREN AND VULNERABLE ADULTS AWARE OF CONTRACTORS WORKING ON SITE IN AMPLE TIME

RISK ASSESSMENT AND GOOD PRACTICE

Health and safety legislation generally requires that, where appropriate, children and vulnerable adults are kept away from areas in which contractors are working at a school. Where contractor works are physically separate from the core of the school and its main entrance a DBS check will not usually be necessary. However, when this isn't the case, good practice procedures such as the following should be considered to ensure compliance with the statutory requirements of KCSIE:

- Conduct a risk assessment to identify the activity, level of unsupervised contact and associated risks

- Implement contractual arrangements to ensure contractors' employees are subject to the appropriate level of DBS check
- Require contractors to comply with the school's child protection policies and procedures
- Prepare a Code of Conduct for contractors to sign and adhere to whilst at the school (advised in some council areas already)
- Plan in advance a contractor's attendance at the school site to ensure contact with children and vulnerable adults can be avoided or minimised. If contact cannot be avoided, procedures should be considered and implemented for supervision and escorting arrangements
- Make children and vulnerable adults aware of contractors working on site in ample time using appropriate methods of communication
- Advise children and vulnerable adults to avoid contact with contractors whilst at the school site
- Provide clear identification for contractors whilst at the school, such as high visibility clothing and identification badges
- Ensure that contractors are not left unsupervised with children or vulnerable adults. ■

Christina Sledmore is senior solicitor at Rollits LLP

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NOUVEAU NOSTALGIA

The completion of Withernsea High School's new building coincided neatly with the school's 60th anniversary, offering a chance for the school to reconnect with its alumni. **GEORGE CAREY** caught up with media co-ordinator **TIM NUTTALL** to find out what was involved and how the new facility seamlessly unites past and present



How did you come to the decision that the school needed a new building?

We'd needed new facilities for quite some time and early in the 2000s there was talk of us being involved in the Building Schools for the Future programme. At one time there was the idea of making a single, 'super campus' that would combine our high school and the primary school, but that fell through. Our original building dates from 1955 but it's expanded over the years to meet demand; the last addition was a new teaching block built in 1974. Our site sprawls backwards and you can see where the additions have been made over the years. These buildings were created to hold 1,200 students and our numbers are now around 800, so there's been quite a drop over the years which was part of the reason for the new build.

So what did the new build actually involve?

In 2012 we had a new sixth form centre built at the front of our site which is a really modern, light and spacious building – and that just highlighted the need for something similar for the rest of the school. What we're looking at now is a school comprising a combination of 70% new build and 30% refurbishment of an existing building. We've kept the original front block of the building, retained the dining room, the main hall, the library and a number of teaching rooms. The new building has a fabulous new teaching block, which houses various subjects, and there's also a new sports hall, a dance studio and fitness suite. A lot of space was created when old parts of the school were demolished – some of this landscaped and part of it used to create a new 3G all-weather pitch. It's a really modern building which helps encourage learning because environment is such an important factor when it comes to inspiring students.

It sounds like a complicated build. Have you been able to keep to deadlines?

The initial deadline was early 2016 but the whole project was brought forward so that work began in December 2014. The first steel work

went up in February 2015 half term and I was standing here looking at the actual building in July 2015 – progress really has been amazing. I believe someone from the construction firm said it was one of the quickest turnarounds for a project of this nature (about 35 weeks) plus, we were pretty lucky with the weather. We actually moved into our brand new, state-of-the-art, multi-million pound teaching block in September 2015. We've seen so many changes, including the demolition of most of our pre-existing buildings, the completion of the new teaching block and the extensive refurbishment of the retained parts of the original school.

The final phase of demolition work began on 25th April this year. The C Block, as it was latterly known, formed part of the original layout of the school and was a fondly remembered focus point on our 60th Anniversary Open Day last year. It's planned that a number of bricks from the demolition will be offered for sale as souvenirs to former students who would like to own a small part of their old school. Elsewhere on the school site work is progressing well on the all-weather sports pitch and plans for an official opening of the school have been tentatively set for September 2016.

I hear you managed to tie the building project in with the students' education.

From the start of the whole process the construction company was really keen to involve our students, which was fantastic for us. From day one students were doing things like helping to mark out corners of the new building with specialist equipment and we had them involved with turning the first sod. Then we had a 'brickwork challenge', with teams of students given the task of building a small cavity wall on the site. It was decided that the winning team would be given the opportunity to put up part of the brickwork in the new building and in July the victors were given the honour of completing the final square of brickwork next to the main entrance of the new school. A special plaque bearing the names of the students involved

will create a lasting tribute to their efforts. The winning team comprised three girls and a boy and, as we're really pushing the girls towards engineering, it was great that the winning team had such a strong female presence

And you've used the new building to create stronger alumni relations. How did you do that?

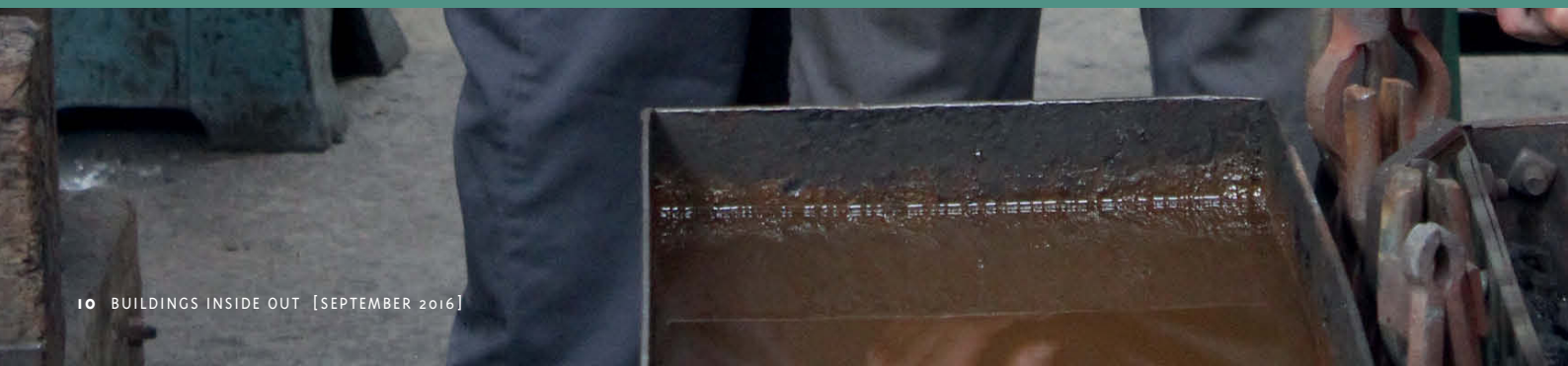
We couldn't have asked for better timing. The original building opened in 1955, and a lot of people have passed through the doors in that time, so when we knew about most of the site being demolished I told the management team that I wanted to hold an open day to invite ex-pupils back that would serve the dual purpose of taking people back down memory lane whilst also letting us build vital connections with our alumni. I've always maintained that the success of our current students lies in the success of our former students. We're in an isolated community, 18 miles east of Hull and, although these days it's not so much of an issue because of technology, I think sometimes our students can feel a bit isolated.

Our original official opening by Lord Halifax in 1955 took place on April 28. We celebrated our 60th anniversary last year with the announcement of the largest open day in our history. It was held on July 4 2015 and about 3,000 ex-pupils turned up. It was amazing, and far exceeded my expectations! I made sure they had the full school experience, including school dinners being served. They were given a tour of the building and we had various activities going on and exhibitions about the school's history. On the back of that we got a lot of publicity. The BBC recently found some footage of the school from a 1969 documentary series on BBC 2 called *Man Alive* – the film crew came here because Withernsea was one of the first – if not *the* first – comprehensive schools in the UK – one of our little claims to fame. The footage got a lot of people talking about the school and some pupils came back to have a look for the first time in 50 or 60 years. It was a brilliant day and a fantastic bridge from our old school to our beautiful new build. ■

spotlight on



A TASTE OF SUCCESS



As an all-boys state boarding school Brymore Academy in Somerset is truly one of a kind. **JESS PIKE** speaks to business and estates manager **PATRICK COLL** about the school's beautiful new dining hall and the lessons learnt during its design and construction

So what's your background, Patrick?

I've previously worked as a learning support manager in a big secondary school in Bristol but moved into the business side of things three years ago when I joined Brymore Academy as business and estates manager. I'd done a lot of property development before, and ran my own businesses; in this way I was well placed to lead on big building projects here.

And why Brymore?

I came here for a challenge, but also because it's a pretty unique school. We're an all-boys state boarding school and we specialise in horticulture and agriculture. As such, we have a farm, dairy cows, beef cattle, our own bull, 160 sheep, 140 chickens and 10 breeding sows in addition to a grade II listed walled garden. Every boy who attends the school works on the farm. It's a pretty interesting place to work!

And what's the school's history?

The actual site used to be a family estate and dates back to when John Pym was owner. We've got the main house, which was built in the 1700s, and some stable blocks which became the design and technology block (another speciality of ours) in recent times.

What's the student demographic?

We've got a real mix of students with the majority coming from local counties and some hailing from much further away (including those with British passports who live abroad). Whilst a number come from farming backgrounds others just wish to take advantage of the unique learning experience we deliver. Brymore offers a great value alternative to independent schools with a focus on the traditional.

What do students go on to do?

A lot move into the farming industry but a number move into engineering – agricultural

or mainstream. Some progress further, and study areas like veterinary science and teaching, whilst others have joined the armed forces. Even boys who have no previous farming experience end up in the sector; they just fall in love with Brymore and the country way of life when they arrive.

How many boys do you have on roll at the moment?

In the last three years we've grown quite a bit; there were about 160 boys three years ago and we now have 250 on roll. Sixty per cent are boarders and 40% are day students. The increase in students has, happily, coincided with improved results; last summer we had the best GCSE results we've ever had. Our average class size is between 16 and 20 whereas, in my previous school, the average was 32. Most classes at Brymore have support staff as well – in some classes you have two members of staff to 16 boys, which is pretty good.

You seem to have lots of positive things to say about the place.

I think it's an amazing school and I fell in love with it when I came to look around three and a half years ago. I really like the fact that, as business manager, I know every student's name and there's a real family atmosphere. When you come down the drive, which is a grand old avenue of trees, it feels like you're arriving at a big private school, but nothing could be further from the truth!

So tell me a bit about the new dining hall.

Back in December 2014 we applied to the Academies Capital Maintenance fund for the new dining hall, which was finished about three months ago. The old dining hall was built in the Second World War, when Brymore was a Prisoner of War camp, so it was an unsavoury, prefabricated structure which greatly needed improving. ➤

What were the main building challenges?

It wasn't easy because we were working around a lot of old buildings and we were keen to make the design fit with the rest of the school. Plus, over the years different drainage systems had been put in so it was tricky working out exactly what was in there and what needed to come out.

What advice would you have for school leaders undertaking building projects of a similar scale?

The biggest thing we did – and I know it's not cheap – was to have lots of site surveys done. With older buildings you never really know what you'll find underneath the ground particularly when you consider the fact that building design and construction was quite different in the 1800s. Seeing what was there was crucial in terms of working safely and effectively and meant that we weren't going to cut off water and drainage supplies by mistake.

I think if we'd have gone ahead without the site surveys we could have been delayed no end; there were things we didn't even know existed that were brought to light but we were able to plan around them. Doing it retrospectively would have been an absolute nightmare. When you're finally out of the ground the building side of things gets a lot easier!

And did you work closely with the architects on building design?

Yes. We played a big part in the design and gave the architects a detailed brief in terms of what we wanted, particularly around the colouring of the building which we wanted to match the neighbouring buildings. We went for an older style brick, which blends in nicely with the rest of the site. We didn't want an ultra-modern building but we did want it to be really light and airy and a place where the boys would want to be.

As a result we've got lots of high windows – lots of glass really – and suspended lights, as well as bright, light walls. I guess what we were trying to do is modernise and futureproof the building whilst preserving the school's

history. We never want to ignore or forget the fact that we're on an old estate with lots of history.

And what do the boys think of the new space?

The boys love it – it's the hub of the school now. At any boarding school the dining room and kitchen are the hub of the school – like at home – so it's nice that it's a space they like being in.

As business and estates manager I imagine that building projects only take up 50% of your time?

Yes, I'm also involved with looking at the school as a business, as opposed to just an education establishment, and developing new funding streams. As a school we're quite expensive to run; despite having a relatively small number of boys on roll we're physically pretty big and have about 120 acres of land. So in recent years we've hired out parts of the site for weddings, had conferences and had a number of large churches use the site for retreats. Since I joined in 2012 we've also brought all the catering in-house, primarily to ensure the boys get healthy and nutritious meals but also so that we can use our own produce. This change has been great for saving money but also for generating income. We now cater for three local primary schools which need to provide their Key Stage One pupils with the government's universal free school meals (UFSMs) but don't have their own kitchen facilities. That's brought in quite a substantial income and a great sense of satisfaction in the sense that we're helping out local primaries which may have had to find money to build kitchens or use larger catering contractors.

And your boarding facilities have also recently been renovated?

Yes, the old boarding house was renovated in 2010 and we also built an additional two boarding houses on site so we can now accommodate 150 boarders. It's also been great in terms of lettings, as we can now hire out the facilities to conferences, weddings and holiday camps. ■



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Train to win

Whilst sporting facilities vary from school to school all SBMs agree that encouraging students to be more active is a top priority. **ALICE SHOLL** takes a look at what the latest gym facilities have to offer

We've all signed up to a gym membership that we haven't fully utilised; whether you were in your twenties, thirties or forties when you first became acquainted with the treadmill, most of us wish we'd started a little sooner. But what if you'd kicked off your exercise regime back at school? Increasing numbers of on-site gyms in schools are making it more convenient than ever for students and staff to access health and fitness facilities and there's never been a better time to join the club.

The fact is, children in the UK aren't doing enough exercise, and mandatory PE lessons alone aren't cutting it. "Physical inactivity is an increasing problem," says Georgie Delaney, creative director at The Great Outdoor Gym Company. "Sports classes in schools often comprise less than the recommended five 30-minute sessions a week so it's very important to use pupils' free time to encourage movement."

An on-site gym can help to ensure pupils get those recommended 30 minutes and can benefit from them in other ways too. As Jonny Curley, director of Anytime Leisure, explains, "Student wellbeing, social skills and teamwork, as well as physical and mental health, can all be improved through a gym offering within a school."

A LASTING INVESTMENT

If you choose your gym equipment wisely, students are sure to reap the physical and mental benefits, as will the year group after them and the year group after that... "New machines will have an intrinsic value and have a lengthy life span," Al Jacobs from

the commercial sales division at Fitness Superstore, points out. "If you use commercial pieces their longevity is particularly excellent."

There are many options to choose from too. "When it comes to product specifics it comes down to the goals of the gym," says Al. "For something that's capable of covering both cardiovascular and strength training, you're looking at a broad range of equipment. If you want to cover each muscle group, various exercises and machines can enable you to do this." Al says that you can have a great level of freedom with free weights and strength training – such as benches, bars, weights and plates – but this is where risk comes in. "If students use these you need to provide full time supervision."

A SAFE SPACE

As with any big change within school, safety must take top priority. "When planning a new school gym space a school business manager should first create an accurate brief on how the school plans to utilise and manage it," says Jonny. "For example, will it be only for pupils and staff to use or for private hire too? Once a brief has been established your provider can measure up the available space and take into account the school's ability to manage it," Jonny explains. "One should avoid putting large pieces of equipment in the centre of the space, for example, as this makes it difficult to supervise the entire room from certain angles."

Jonny recommends splitting your gym space into 'zones'. "Zones within a gym floor usually include cardio, fixed resistance, cables,

free weights, stretch, functional, performance and studio exercise. After deciding which zones are priorities you can allocate space and decide how many stations will be required in each zone."

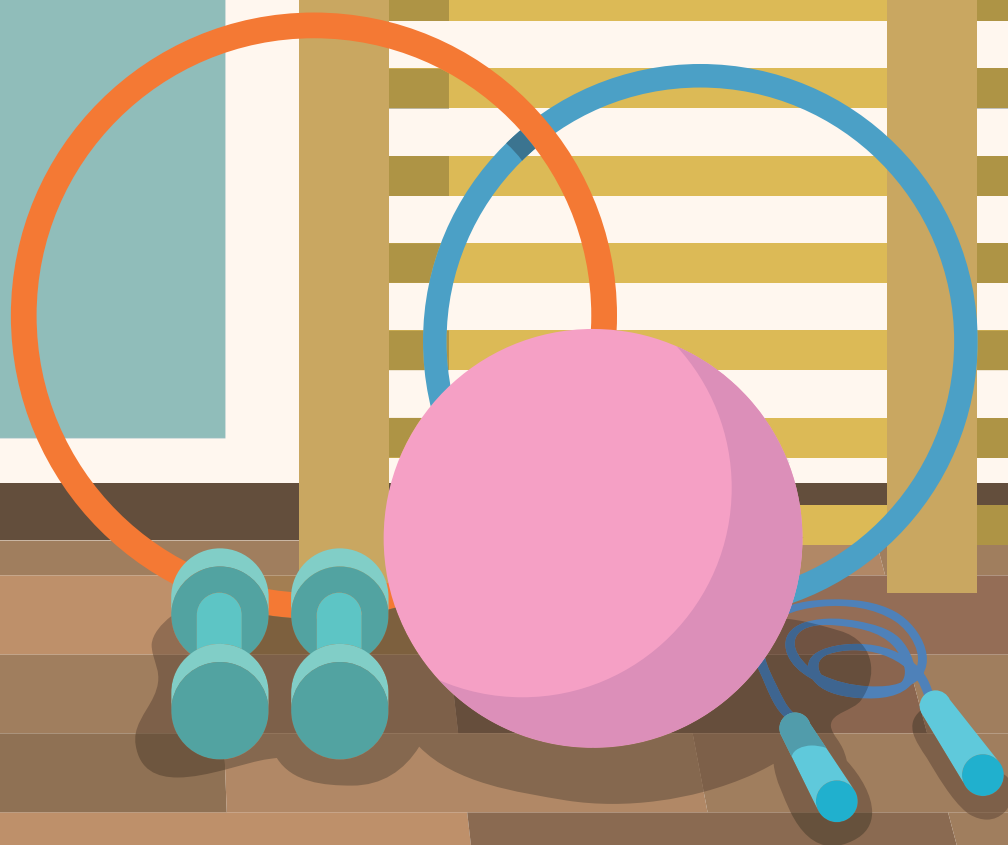
If you'd rather not be limited to a fixed amount of space, why not ditch the concept of the indoor gym altogether? Georgie recommends an outdoor gym to provide a "barrier-free" environment for students but, if you plump for this option, gym location is even more important. "It's vital to choose the right location and consider how users will feel in that space," Georgie explains. "If it's overlooked by a busy library, for example, pupils might not want to use the gym during the day. It's equally important that the users don't feel cut off, so a visible area that's slightly screened off by plants could offer the best of both worlds." Safety is still paramount, particularly if you have younger pupils. "Pick a gym space specifically designed with under 14s in mind," Georgie reminds us.

A WINNING FORMULA

Some equipment is safer than others. Al says that machines are often safer than pieces that require assistance to use. "The funny thing is that the idea of a gym is to over-exert yourself – but it's about over-exerting yourself responsibly. Machines offer that element of autonomy and it's quite safe to use them with a level of common sense alongside being shown the inherent risks as you go."

This includes a general sense of awareness – Jonny says it's essential to consider equipment's power requirements and appreciating that ➤





WHAT STARTS OUT AS A
CHEAP OPTION CAN WORK
OUT AS VERY EXPENSIVE!

any cabling must be safely kept under equipment so there's no possibility of it becoming a trip hazard.

AN OFFER YOU CAN REFUSE

Importantly, avoid making purchases that seem too good to be true. "Schools on tighter budgets might think that the cheapest option is the best option, but this rarely works out," Georgie warns. "Cheap, Chinese-imported equipment may not meet European standards and in our experience will cost more in the long run through replacements."

Al agrees, "Gym equipment's a bit like a car. If you're driving up to Aberdeen and back every single day in a banger, it's more likely to need a service," he says. He recommends avoiding pieces designed for domestic use altogether. "They're a very cheap option but they'll come without a warranty and, considering the heavy usage they'll be under, they're likely to break on a regular basis. Without a warranty a manufacturer will pretty much tell you to fix it yourself; that'll end up costing more than purchasing a commercial piece in the first place."

MONEY MATTERS

No doubt the procurement process is bound to be at the forefront of any SBMs mind. Jonny says the ideal process includes requesting more

than one tender. "Of course, each council or trust area differs in terms of its tender process but we'd recommend a school leader requests at least three tenders to be sure of value, offering and understanding of the project," he says.

To ensure the equipment you're considering is up to scratch Georgie recommends paying a visit to the factory in which gym equipment is made. "Staff from the school should visit the factory and do a 360-degree critique of the equipment," she says. "Suggest the manufacturer give you a presentation on why you should choose them."

If all this has you clutching at your purse strings bear in mind that there are many grants available for exactly this type of project. "Funding bodies recognise the importance of encouraging physical exercise and may be willing to offer financial support for your project," says Georgie. "Organisations such as Veolia, Sport England, Public Health England and the National Lottery can provide funding, among others. There is definitely plenty of funding out there so it's worth having a look!"

What will you work on first – your strength and muscles, or perhaps a bit of cardio? Careful planning, a smooth procurement process and a touch of creativity could get your school the results it's been looking for – transforming your pupils and staff into shining examples of health and fitness. ■



...poor start.

Head start...



Psychologist Aric Sigman found that children exposed to nature in their educational environments scored higher on concentration and self discipline; did better in reading, writing, maths, science and social studies and showed improved behaviour overall.



“ The big windows let so much sunshine into the building and the natural light gives them an extra energy boost. ”



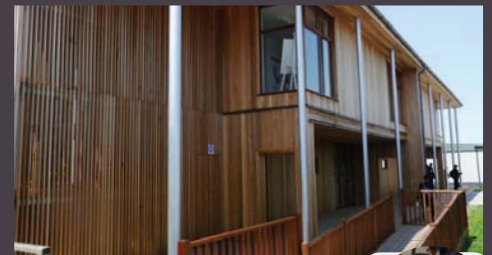
Verity, Primary Head teacher



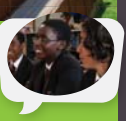
“ Our new Learning Escape has given us the opportunity to bring the outdoors and indoors together in an inspiring, natural space. ”



Paddy, Primary Head teacher



“ I like this building because it is really light and airy and there is no stress in the room. It's really open and just makes you feel at home. ”



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Let the sunshine in

With space an increasingly sought-after commodity in schools, coupled with the strong evidence to support the value outdoor spaces bring to learning, many heads and SBMs are turning their attention to outdoor areas and looking at how the installation of innovative learning spaces could transform them. **ALICE SHOLL** speaks to the experts to find out what these can offer schools – and decodes the procurement process

Fresh air, light, and greenery: unfortunately, not things you'd often associate with a classroom. For children and adults alike the great outdoors is usually associated with playtime only, whilst the indoor areas are strictly reserved for lessons and learning. The good news is you don't have to play by these rules; in recent years more and more schools have chosen to opt for outdoor learning spaces instead of the traditional indoor classroom. From canopies and glass houses to modular buildings and shelters, alternative classrooms are popping up in schools across the country and it's about time your school felt the benefits too.

Think about where you're most likely to feel inspired and energised – in a dark, dingy indoor space, or out in the sunshine? "Studies have revealed that the use of the outdoors

in schools is not only beneficial to the students but also to the adults," says Kirsty Huxtable, project manager at Fordingbridge. "After teaching outside teachers have noted improved relationships with students, and enhanced personal development, as well as curricular benefits."

A BREATH OF FRESH AIR

The great thing about an alternative learning space is exactly that – it's a completely different environment and often leads to a fresh approach to teaching and learning. "Outdoor learning spaces can offer an innovative way of presenting ideas," says Kirsty. "They create inspiring and stimulating resources which can enhance teaching quality. The benefits of taking teaching outdoors have been shown to help with indoor teaching and learning too."

Pupils and teachers will notice the difference, and so will Ofsted. "The importance of outdoor learning is well-documented, most notably by Ofsted," says Pippa Bailey, managing director at Solardome. "Learning outside the classroom is recognised as important for the personal, social and emotional development of children and young people and, now that there's a greater emphasis on horticulture in the National Curriculum, it's time to take learners beyond the confines of the traditional classroom."

CHOICES, CHOICES

Outdoor learning spaces get a unanimous thumbs up from pupils, teachers and the inspectors but what options are out there? A geodesic dome – a spherical structure made up of a series of tessellating triangles – mightn't be the first thing that springs to mind but is a

very real option. “A geodesic dome can serve as a tranquil space for nature groups, circle time and quiet study time as well as staff meetings,” says Pippa. “For some learners this represents an enhanced sensory space where they can learn in a hands-on way without even realising they’re being taught.”

A different, but equally unique, option is a canopy. “Standard and bespoke canopies and walkways are designed to completely transform spaces, large and small, into multi-functional, weather-protected areas,” says Kirsty. “These are suitable for learning, socialising and dining all year round.” Handily, Kirsty explains, these can also fit around a variety of spatial requirements and design aspirations and can be made from a variety of materials, from mild steel to timber.

If this sounds too great a leap from the traditional classroom, an outdoor modular classroom can provide the best of both worlds. “As a standalone, self-contained classroom, a school can specify the design and layout it needs to fit its requirements,” says Mark Brown, consultant for The Learning Escape. “The result is a space that offers a greater connection to the outdoors than traditional school buildings.”

This is particularly handy for schools looking to keep smaller children safe from

THE IMPORTANCE OF OUTDOOR LEARNING IS WELL- DOCUMENTED BY OFSTED

harm. “For younger children the classroom can be placed in its own secure space,” Mark explains, “but for older pupils you can allow free-flowing play between inside and outside.”

As Pippa points out, many schools use iconic modern buildings to make themselves stand out. “These landmarks act as a calling card and can become part of a school’s brand,” she explains. “School buildings are indicative of an institution’s overall ethos, its approach to learning and, in particular, its tech-savviness.”

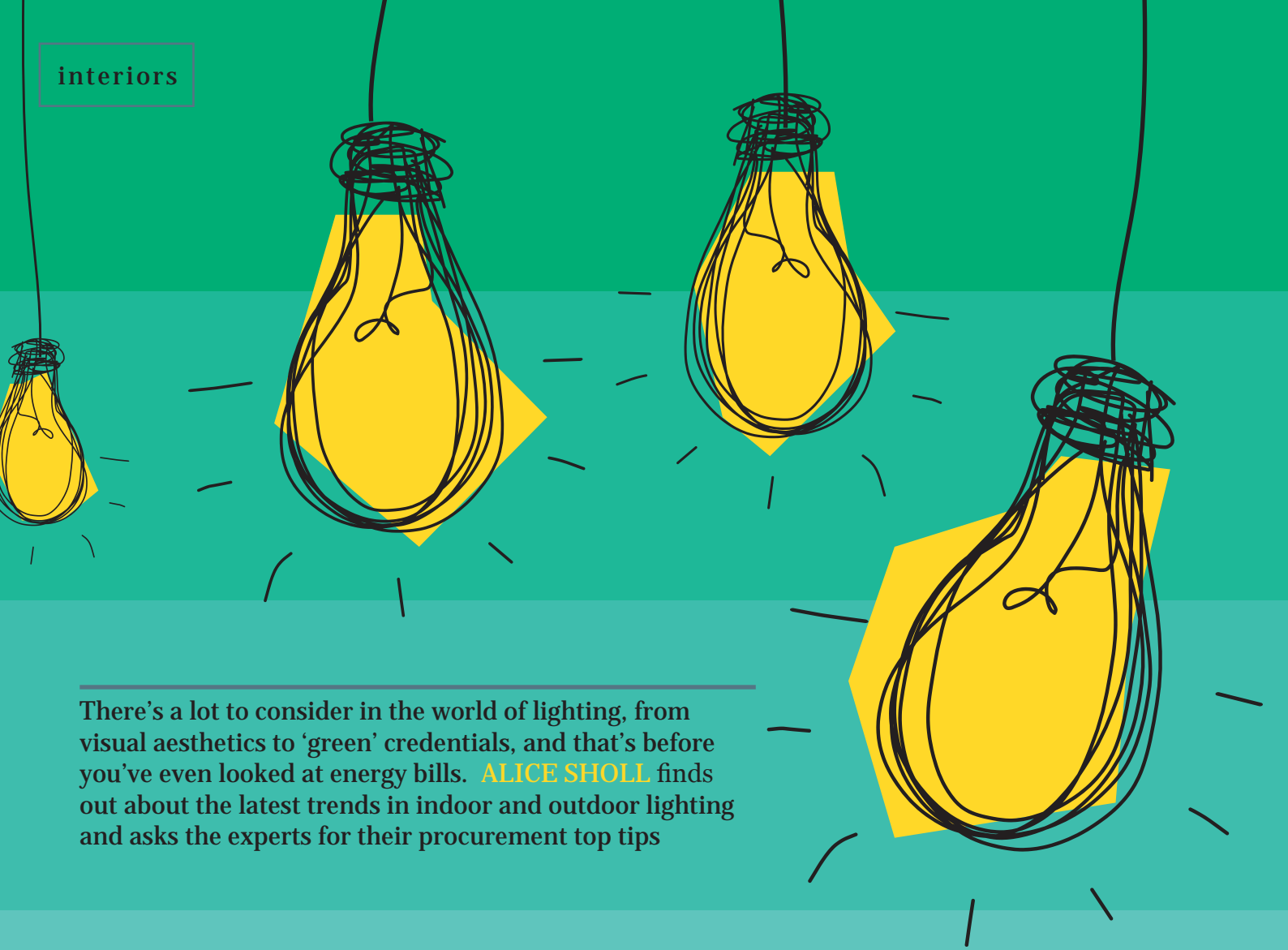
GET PLANNING

If you’re raring to get building don’t forget to take a whole school approach when it comes to design and development, Kirsty reminds us. Pippa agrees, “Bring together an outdoor classroom committee that includes administrators, faculty and staff, students, parents, the building and maintenance department and the local community. The more people you get on board early on, the greater the chance you’ll have of succeeding in the long term.”

When it comes to providers Mark recommends seeking one that will take care of the entire project, “...from design, through to planning permission, adherence to all health and safety regulations and, finally, the actual build”. Go for one that has a track record of working in educational establishments, too. “An SBM would be well advised to ask potential providers to give them the opportunity to view other buildings created in their area,” he says.

A key consideration which Pippa recommends is planning. “What needs to be done, by whom, and by when? Who needs to be involved? Are they being consulted? Do you need to seek advice from others, such as departments and local authorities?” She advises SBMs to establish the roles and responsibilities of everyone involved early on, from who will approve the shortlist, to who will be in charge of quality and price evaluations.

Bright and inspiring learning spaces are within your school’s grasp. Whether a bespoke canopy has tickled your fancy or you’re more taken by an eco-inspired structure, careful planning will have it built and ready for learners in no time. Go on – do something different: give your students the inspiring atmosphere they so deserve. ■



There's a lot to consider in the world of lighting, from visual aesthetics to 'green' credentials, and that's before you've even looked at energy bills. **ALICE SHOLL** finds out about the latest trends in indoor and outdoor lighting and asks the experts for their procurement top tips

SWITCHING ON

For the majority of homeowners lighting is as simple as a trip to Ikea and the flick of a light switch.

For SBMs, however, it's not so effortless; ensuring that an entire school's lit up for eager learners and busy staff isn't an easy task. There's a lot to consider in the world of lighting, from visual aesthetics to 'green' credentials, and that's before you've even looked at energy bills. Here are a few things to mull over if your school looks like it needs brightening up.

MOOD LIGHTING

It's all too easy to get used to poor quality light, strained eyes and a dim atmosphere

without registering the negative effects they have on you and your colleagues. David Hogben, managing director of Sky Electrical, says that many school leaders underestimate the detrimental effect that poor lighting has upon mood. "We can all recall how we feel on a bright sunny day: happy, energised and ready to get on with whatever tasks lie ahead of us. Yet I go into countless classrooms that have less than half the recommended lighting levels they should have."

"These rooms look drab and I can only imagine how students and teachers feel on a dull and dismal winter's day – it's hardly an environment conducive to teaching," he continues. "By contrast, a bright, well-lit

classroom will stimulate staff and pupils. It's not rocket science, just common sense."

According to government lighting requirements, classrooms need a light level of 300 lux and this increases to 500/750 lux for specialist areas, such as art rooms. Poorly-lit classrooms can have a level of 100 lux or even lower, says David. "If schools followed government requirements they'd see higher achievement levels among their pupils."

HIDDEN COSTS

If this isn't reason enough to reconsider your current lighting provision it might be that you're not aware that you're paying through the nose for your current set up. Rob Little,



project director at UK Energy Partners, warns that cash that could be spent elsewhere is often lost to energy inefficiency. “For most schools money to fund energy conservation measures is probably already in the budget and being spent on wasted energy.”

Efficiency often comes down to shelf life. “Products with a long lifespan need to be replaced less frequently which allows schools to reduce labour costs and minimise downtime,” Simon Rogers, marketing manager at TamLite, explains. To avoid the need for regular replacements, don’t jump at the cheapest option. “Instead, consider products that offer proven energy efficiency and lifespan in order to save on electricity and maintenance costs.”

A BRIGHT NEW FUTURE

When it comes to efficiency, LEDs are the way forward. “Switching to LEDs can save up to 80% of your total lighting costs, so it’s the obvious way to go,” Rob says. “Not only are you creating a better learning environment but savings on your energy bill are immediate and sustained. LED lights also last three times longer than other lighting types, saving on maintenance costs.”

The little LEDs we first saw on digital wristwatches in the seventies have come a long way since; Rob says that LED lighting technology has developed quickly over the last few years and has, in turn, reduced sharply in price. “In fact, we’ve seen prices drop by at least half in the past two years making LED an easy, affordable and necessary option for saving funds that would be better spent elsewhere, such as, on textbooks and teachers.”

“In older schools we still see switch-start fluorescent lights that use a huge amount of energy compared to modern, high frequency fluorescent and LED lights,” David says. “By upgrading lights, energy levels and running costs can be reduced by as much as 50%. I’d always urge schools to install LED lights as maintenance savings are even greater than

with high frequency fluorescent lights.”

It seems that the experts don’t have a bad word to say about LED lighting. It’s also a great option for non-classroom interiors – David says that the reduced necessity for labour is particularly handy where lights are hard to reach, such as in sports halls. But Simon reminds us not to take a one-size-fits-all approach. “There are no easy answers. Different spaces may require contrasting approaches – for example, lighting conditions will be different in the average classroom and the typical sports hall.”

THAT EXTRA SPARK

There are also other aspects to lighting you mightn’t be aware of. “Optimising the colour temperature of your lighting systems can impact positively on pupil morale and overall productivity,” Simon points out. And to save energy consider ditching the traditional light switch altogether. “Linking fixtures to sensors that’ll turn systems on or off in accordance with lighting or occupancy conditions can result in a dramatic increase in energy savings.”

To avoid the drab, dim classroom atmosphere that David describes keep lighting colours natural. Simon recommends referring to the Colour Rendering Index which measures the ability of a light source to reveal colours in objects in a way that’s similar to a natural light source.

A HELPING HAND

One could spend plenty of time mulling over these options but don’t forget to consider what a good procurement process looks like. Rob recommends calling in the experts before you commit to a project. “View your energy services vendor as a partner, not just a supplier, and be sure your partner can stand behind every statement and warranty.”

Simon advises employing a contractor who has experience of working specifically in schools, and will design lighting solutions

TOP TIPS

Say farewell to old switch-start fluorescent lights

Install light and motion sensors so lights are only on when rooms are in use

Choose products with a long lifespan

Avoid cheap and temporary lighting solutions – they’ll cost more in the long run

Ask lighting suppliers for references from past clients ideally in the public sector

Don’t forget that different spaces have different requirements.

for individual rooms, ensuring light levels are correct. “They should also provide high quality light fittings specifically designed for schools.”

There are many suppliers out there, so due diligence is a crucial part of the procurement process. “Always ask lighting suppliers for references from past clients. If they can supply endorsements from other schools or public sector organisations that you can easily check out, that’s a bonus.”

If all this talk of purchasing makes you fear for your budget don’t forget the potential savings that can be made in the long term. And in the short term don’t be afraid to sniff out available funding. “Schools are often wary of seeking finance for an energy-saving lighting upgrade but savings made from reduced energy costs will pay for it,” Simon explains. “Also, applying for such funding needn’t be an onerous or complicated task – many lighting contractors will help schools fill out the application paperwork.”

Unless you’ve had a recent lighting upgrade chances are that when you next step into your school building you’ll soon realise that your lights have rather lost their shine. Picture it now: new LED lights could inject a dose of energy back into the school and return a tidy sum to the school purse too. So what are you waiting for? Bring that sparkle back into your school building – there really is no reason not to. ■

NOT ROCKET SCIENCE!

When it comes to kitting out a new science lab there's a whole galaxy of mind-bending possibilities to consider. Which designs best meet teachers' and pupils' needs and how much should you be looking to spend? EMILY HARDY investigates

ABSTRACT

Back in the day school science benches were scarred with decades of chemical spillages, scorch marks and compass engravings – initials etched to pass the time when you couldn't see the experiment being demonstrated at the front. Quite frankly, you were lucky if there was a working bunsen burner, a pair of goggles that fitted your face or a tripod with all three legs still standing.

Students today don't have to suffer such compromises; not only can they observe each experiment clearly, but they also have access to the slickest equipment around. Science lessons now comprise more technology, more data and more explosions than we could have dreamed of. But in order for a school to make this ideal a reality it needs to have the right kit – a lab that will engage the interest of even the most apathetic of students.

It might sound like a big investment but it's worth doing properly; a poorly designed space with out-of-date equipment will impact on a generation of students and staff. "Students we speak to often tell us they didn't enjoy working in their old science labs because they were too cold, too dark or because they couldn't hear the teacher properly," says Melanie Laing, director of Innova Design Solutions. Science is a stimulating and exciting subject and the same should be true of the space it's taught in.

EQUIPMENT

Space is at a premium in most schools so it's important to use it wisely, says Melanie. "A crowded, untidy classroom restricts movement, communication and concentration, so consider how fixed and loose furniture will be arranged to give students enough space to safely explore scientific ideas. Replacing old-fashioned rows of benches with dual purpose benching (suitable for both theory work and practical experimentation) is a great way to save space. Planning your lab in this way ensures students are quickly able to switch from theory to practical studies whilst reducing distractions by keeping services out of reach on the opposite side of the bench." Melanie adds that creating clear lines of sight, clutter-free work surfaces and good circulation areas has a positive effect on behaviour and concentration.

When it comes to materials, Melanie explains that selecting furniture made from the right stuff will help to reduce cleaning and maintenance costs while ensuring your lab retains its good looks. According to Tracey, schools most commonly use solid grade laminate worktops. "Cast epoxy resin or corian/solid surfacing are alternatives but these are

more expensive and have specific uses. For example, cast epoxy resin is resilient against concentrated chemicals making it more appropriate for university/research-level work, whilst corian/solid surfacing, with seamless joints, is easy to wipe clean but stains when it comes into contact with particular chemicals."

Worktops made from durable scratch, impact and chemical resistant surfaces, such as high performance Trespa, Velstone or Staron, offer a stylish finish as well as ease of maintenance and longevity, Melanie adds.

Don't forget to consider storage too. Depending on the equipment involved, some storage options will be more appropriate than others. Once you know the amount and type of storage you need you can assess if there's sufficient space under the benching or if

additional storage space is required. "Remember that there must be suitable knee-space under the worktop and keep an eye on accessibility," warns Tracey. If additional storage is required, consider whether cupboards, drawers or trays will best cater for the science equipment you'll be storing. "Do you need lockable units, or should the equipment always be accessible?" asks Tracey. "Don't forget to choose a handle that's easy to pull and easy to clean! There are numerous variations available, but look out for the price tag on designer options."

RESULTS

Research by the University of Salford has found that improving classroom design can boost a pupil's performance by up to 25%, plus, education spaces which have a variety of design elements tend to be more stimulating and help students absorb what they're being taught. "So, when creating your lab, consider lighting, temperature, colour and acoustics – these all have a huge part to play in transforming students' attitudes to a learning space and, by extension, the subject that's taught there," says Melanie.

EVALUATION

Do your research

Melanie suggests speaking to colleagues at schools where labs have recently been installed. "Seeing a new science lab in action is a great way to get inspiration and establish what might work best at your school."

Beware false economy

The most common pitfall is to only look at the cheapest solution, "...but this is often more expensive in the long run," says Vincent English, CEO of Vernier Europe. "If students have to continually be shown how to use the equipment it's a waste of time. If the product isn't appealing enough to inspire investigation, and bring out the best in the students, you've prioritised price over quality."

Consult and listen

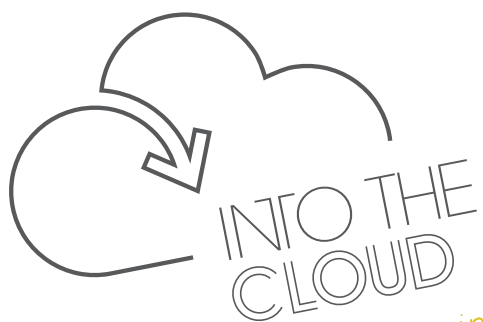
Whether you're planning a new build or a classroom refurbishment, it's important to speak to the relevant team about their needs and requirements – whether it's more built-in storage, better lighting or better provision of services to aid practical work, says Melanie. After all, they'll be the ones using the space!

In short, make sure you're happy with your choice because you'll have to live with it for a long time. After that, all that's left to consider is the colour scheme! ■

METHOD

The following checklist from Tracey Robinson at FBS Contracts provides a great starting point:

- ☑ **Room size** Is it large enough for the number of pupils that'll be using it at any one time?
- ☑ **Access** Is there sufficient and easy access to mechanical and electrical services?
- ☑ **Power** Are there enough pressure and power supplies to facilitate the lab? Will pupils be sharing gas taps and socket outlets?
- ☑ **Services** How many cold water sinks will you need? Will there be separate sinks with hot water? What about draining grooves?
- ☑ **Fume cupboard** Is this required? If so, which type – fixed extraction or re-circulating? Take note of the annual filter replacement costs that come with re-circulating fans
- ☑ **Teacher positioning** What style of teaching best suits your school – focal or circulation? This decision will affect the shape and layout of your lab
- ☑ **Fixed or flexible** Do you intend to rearrange the tables? If not, it's easier and cheaper to opt for fixed benching.



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