Rockfon®

Part of the ROCKWOOL Group

Design for Schools

Education Guide
Schools

How acoustic solutions make a difference to focus and wellbeing in schools

Sounds Beautiful

Are you working with school design? Whether you're building a new state-of-the-art education facility or renovating an old school, this brochure is for you. You will find the latest trends that are impacting the educational space and tips on how schools should be designed with acoustics in mind.

This easy-to-navigate booklet was developed for Architects and Designers as a tool to inspire and guide the reader with insightful knowledge about optimising the education space for learning and wellbeing.

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Our acoustic solutions reduce noise levels in classrooms so that students can hear, concentrate, learn, relax and play.

Parik Chopra

Managing Director, Rockfon

Content

Current **trends in schools**

Do you like the sound of a happier, healthier school? We do too. This is why we're continuously working and innovating with architects to find solutions that help students realise their potential.

Let's take a deeper look at which leaning trends are shaping the design of schools.

Dynamic learning

As we've seen in recent years, schools are moving away from the industrial style of learning, where a teacher stands in front of the students, imparting knowledge with little to no interaction. Today's schools are much more dynamic, where students debate, learn by doing and work in teams - making students part of the learning community. This places a larger emphasis on good classroom design and the need to control noise levels in greater ways than before.

How can we help

Speech intelligibility and actively directing or blocking sound leads to happy teachers and students. Our acoustic ceiling and wall solutions meet the very best performance standards on the market that helps improve a students' ability to concentrate, think and learn.

For every 10 dB increase in noise pollution, 8-9 year-old students performed 5.5 points lower on their national standardised test.

Allen J.G. et al,
Harvard Schools For Health Foundations
for Student Success (2018)

Shared spaces

What we see now is that schools aren't only teaching in the classrooms; hallways and lounges are becoming breakout spaces for interconnection and interaction. Adding to the complexity, schools aren't just used for learning anymore, they're becoming integrated into the wider community - a shared space for everyone, where a neighborhood can utilise the space after school hours, maximising the real estate. and building relationships with the town or city.

Where do we come in?

Creating spaces that function for multiple purposes means that the design needs to appeal to a variety of users. Our acoustic solutions are built for modularity, making it easy to reconfigure a space to look as good as they sound.

A safe space

As we've recently seen, the pandemic has forced schools to become more responsive. This has led to design tweaks that have a much higher focus on hygiene, more focus on ventilation systems and the cleanability of building materials throughout the school, in much the same way that you would find in the healthcare sector.

How can we support you?

Our ceilings are made from stone wool, which is naturally resistant to mould and bacteria. They are easy to clean and designed to meet the most rigorous hygiene codes and safety regulations.

Acoustic regulations for **school design**

Good sound improves learning and understanding. Luckily local building regulations support this and provide clear guidelines for when it comes to the acoustic environment. Please familiarise yourself with the local acoustic regulations for schools in the table below.

Minimum performance standards
(T = Mid frequency Reverberation times)

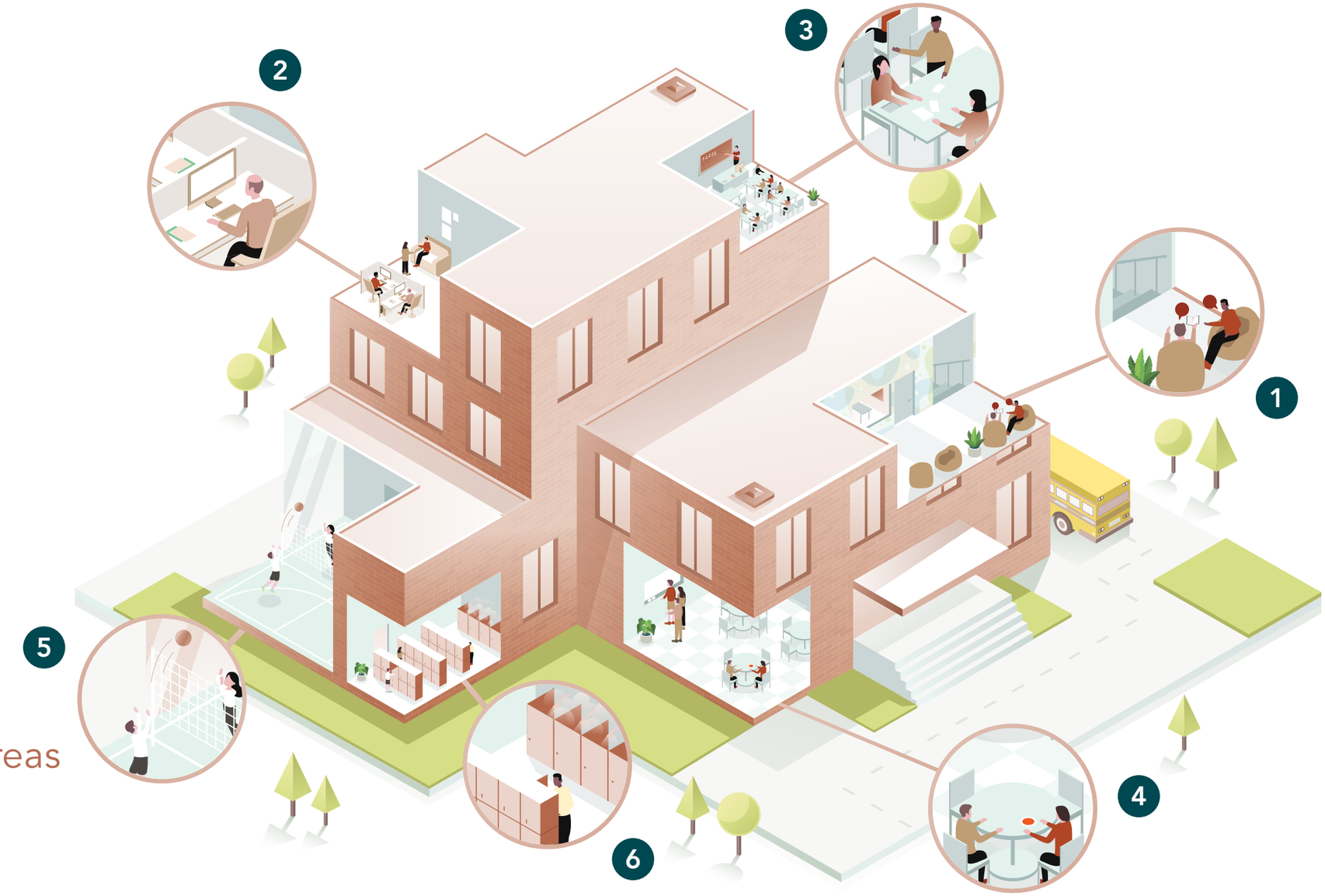
	New build	Refurbishment
Communal spaces and open plan teaching areas		
Open plan teaching area	T < 0.5 sec, STI >0.6	T < 0.5 sec, STI >0.6
Open plan breakout/resource area	T < 0.5 sec, STI >0.6	T < 1.2 sec, STI >0.7
Stairwell	Min Class C ceiling covering >50% stair/floor area	Min Class C ceiling covering >50% stair/ floor area
Corridors	Class A ceiling covering >90% floor area	Class A ceiling covering >90% floor area
Offices & administration		
Cellular office	T ≤ 0.6 sec	T ≤ 0.8 sec
Open-plan office	T ≤ 0.5 sec	T ≤ 0.5 sec
Classrooms		
Primary schools	T ≤ 0.4 - 0.6 sec	T ≤ 0.4 - 0.8 sec
Secondary schools	T ≤ 0.4 - 0.8 sec	T ≤ 0.8 - 1.0 sec
Music	T < 1.0 sec	T < 1.0 sec
Drama studio	T ≤ 1.0 sec	T ≤ 1.0 sec
Cafeteria & kitchens		
Dining room	T ≤ 1.0 sec	T ≤ 1.5 sec
Kitchen	T ≤ 1.5 sec	T ≤ 2.0 sec
Gymnasiums & multi-purpose halls		
Gymnasium	T <1.5 sec	T <2.0 sec
Swimming pool	T <2.0 sec	T <2.0 sec
Multi-purpose hall	T = 0.8 - 1.2 sec	T = 0.8 - 1.5 sec
Changing and shower rooms		
Changing area	T <1.5 sec	T <2.0 sec

Source: Section 1, BB93 and Approved Document E (UK) and Technical Guidance Document TDG-021 (Ireland)

How to design for different **spaces in a school**

Building the future of tomorrow.
The importance of preparing students for the future means building and creating an environment that will support, facilitate and encourage them to learn.

Strength of Rockfon
Our broad range of acoustic solutions give you the freedom to design, whether you are looking to regulate noise in the classroom or need impact-resistant acoustic solutions in gymnasiums. We've got you covered for all of the different spaces of a school.



1. Communal and breakout areas
2. Offices and administration
3. Classrooms
4. Cafeteria and kitchens
5. Gymnasiums
6. Changing and showering rooms

Communal and **breakout areas**

Multifunctional spaces

Hallways are multi-functional spaces that not only welcomes and guides students, teachers and visitors throughout the school, they are also routinely used as breakout areas for students to work and learn together.

These frequently busy areas can suffer from a lot of chatter and heavy foot traffic, which means that it is crucial to have a high level of sound absorption in these areas of a school to enhance collaboration and interconnectivity without excess noise getting in the way.

Shhh. Quiet please, - we're studying

Two elements that are critical for the learning process, whether that be in the classroom or shared spaces, like the hallways or lounges, is enhanced acoustics and access to natural light. Designing these areas for quiet is especially important for children and teenagers, who can have difficulty concentrating.

Acoustics isn't the only important measure. A study of 21,000 students in the US, showed that access to natural light improved reading and math outcomes. Drawing in daylight into the hallways and breakout areas provides great potential to provide a more stimulating environment.

Don't forget the walls

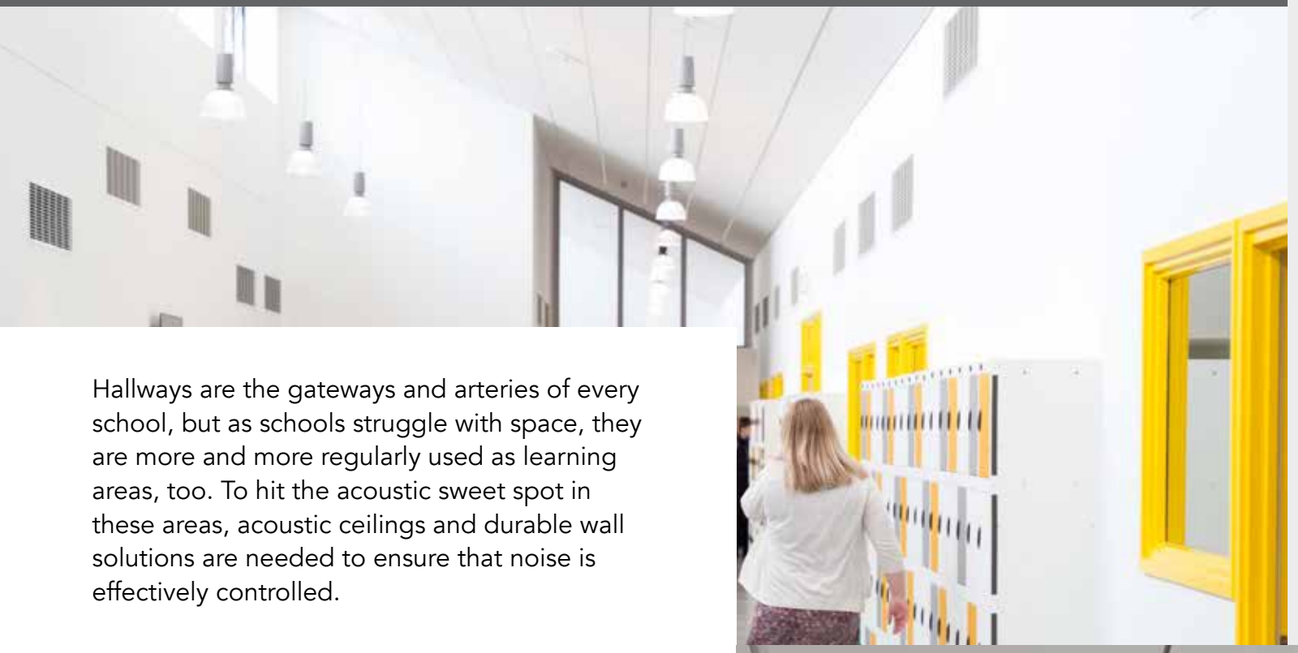
In busy areas like hallways, it can be a challenge to get the acoustics just right, especially because of the many reflective surfaces found here. Walls are a great addition and design opportunity to modulate noise and prevent it from spreading further.

One study of 21,000 students in the US showed that pupils with **more access to natural light** had 26% higher reading levels and 20% higher math results.

Scientific American Mind, April 2009

Get the right solutions for your design

Hallways and breakout area design solutions



Hallways are the gateways and arteries of every school, but as schools struggle with space, they are more and more regularly used as learning areas, too. To hit the acoustic sweet spot in these areas, acoustic ceilings and durable wall solutions are needed to ensure that noise is effectively controlled.

Here are the products we recommend

Rockfon Blanka®

Rockfon Blanka offers best in class acoustics, combined with a super white surface that has high light reflection and light diffusion properties. In fact, the surface draws natural light 11% further into space than many other ceilings. The range also comes in thicknesses of up to 40mm, which is ideal for controlling noise in high activity spaces.

Rockfon® Scholar™

Accessing services in the void above the ceiling is a common requirement in these areas. We recommend Rockfon Scholar which has Class A sound absorption plus durable edges which remain intact even when removed and reinstalled regularly.

Acoustic regulations

Minimum performance standards
(T = Mid frequency Reverberation times)

Communal spaces and open plan teaching areas	New build	Refurbishment
Open plan teaching area	T < 0.5 sec, STI >0.6	T < 0.5 sec, STI >0.6
Open plan breakout/resource area	T < 0.5 sec, STI >0.7	T < 1.2 sec, STI >0.7
Stairwell	Min Class C ceiling covering >50% stair/floor area	Min Class C ceiling covering >50% stair/floor area
Corridors	Class A ceiling covering >90% floor area	Class A ceiling covering >90% floor area

Source: Section 1, BB93 and Approved Document E (UK) and Technical Guidance Document TDG-021 (Ireland)

Solution

1. Use high-quality sound-absorbing materials on the ceilings and walls to reduce the noise and prevent it from reverberating.

2. Use thicker and more sound-absorbing materials around the perimeter of the room to further optimise the sound absorption in the lower frequencies.

CASE STUDY

Islwyn School

Caerphilly, Wales

Challenge:
To create a modern aesthetic in the central 'corridor' space whilst meeting acoustic regulations.

Solutions and results:
Rockfon Blanka Z was used to create a linear aesthetic to accentuate the space and provide an attractive visual contrast between these areas and the rest of the school.

Offices and **Administration**

Peace and quiet

The office and administration areas of schools are where teachers go to prepare for their lessons, chat with colleagues about educational issues and to socialise.

Sadly, these areas can quickly become a forgotten space. While there is rightly an extensive focus on creating the right indoor environments to facilitate student learning, it is also important to have a comfortable and energising space for teachers and administrators, too.

Setting the tone

The design of the offices and administration areas set the educational and professional tone of the school - and privacy is essential for that. Teachers need to feel safe that what is discussed, doesn't leave the room - whether that is a conversation between colleagues, parents or a student. Keeping the sound from spreading is critical in these areas.

Inspire us!

Great acoustics and good indoor comfort is what teachers need to find a reprieve from the hectic and busy day of guiding and nurturing students. By choosing sound-reducing building materials, you can create an escape that will revitalise teachers throughout the day.

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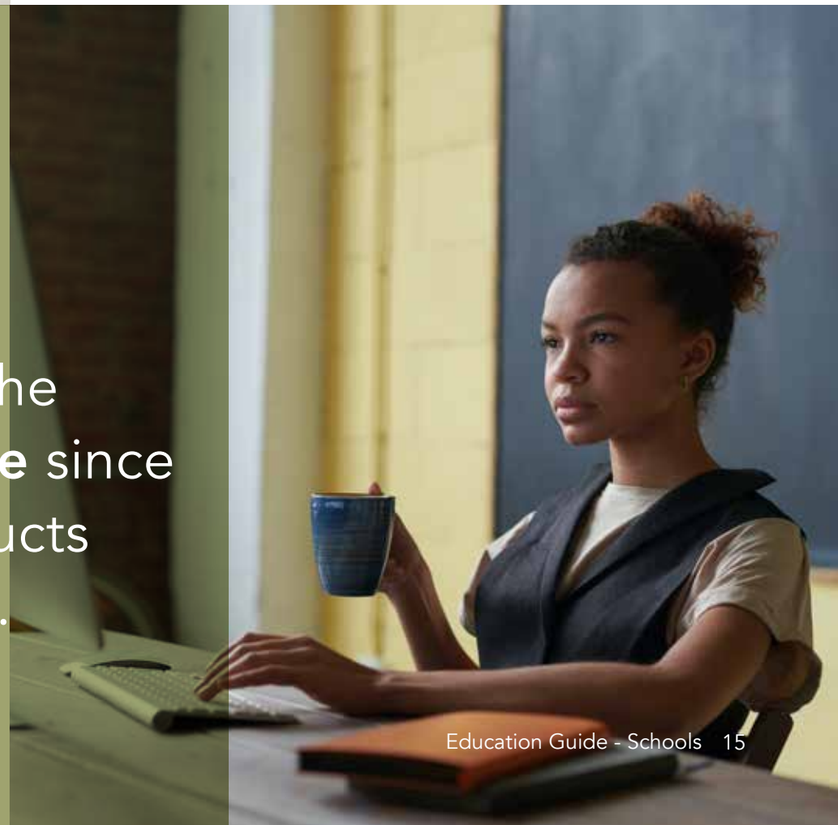
We have seen a remarkable difference in the **indoor climate** since Rockfon products were installed.

Principal Tom Stormyr,
Heistad Youth School



A ceiling that supports

Office and administration solutions for schools

Whether it's a new build or renovation project, we appreciate that school building budgets are often very tight. However, this doesn't mean that you should comprise on acoustics. We have solutions to fit most budgets, and that lets you deliver a comfortable environment that will support teachers and their colleagues.

Here are the products we recommend

Our Rockfon dB range

Our Rockfon dB solutions combines the best of two worlds. It is made with a stone wool core that absorbs noise and creates a comfortable indoor environment. The high-performance membrane on the back provides sound insulation and helps reduce the transmission of noise from room-to-room. This is an ideal combination when you want a restful space for private conversations.

Rockfon® Tropic™

This all-round tile has a Class A sound absorption rating, the highest available on the market, and an attractive white, micro-textured surface. It is available in a selection of standard edges and dimensions, making it a popular and affordable choice in many schools.

Acoustic regulations

Minimum performance standards
(T = Mid frequency Reverberation times)

Offices & administration	New build	Refurbishment
Cellular office	T ≤ 0.6 sec	T ≤ 0.8 sec
Open-plan office	T ≤ 0.5 sec	T ≤ 0.5 sec

Source: Section 1, BB93 and Approved Document E (UK) and Technical Guidance Document TDG-021 (Ireland)

Solution

1. Use high-quality sound-absorbing materials to reduce noise and create a relaxing atmosphere.

2. Focus on sound-insulating materials to keep conversations private and stop sound from spreading.

A teachers' well-being matters!

A recent study in the UK, by Professor Jonathan Glazzard and Dr Anthea Rose, showed that there is a direct correlation between a teachers wellbeing and their ability to perform in the classroom, which is why it is so important to support teachers and educational staff comfort.

Classrooms

A learning space for everyone.

The classroom is that dynamic space in a school where students come together to collaborate, think and learn. Learning happens in multiple ways which requires careful considerations when it comes to room acoustics.

The traditional way of teaching needs to consider the speech intelligibility of the teacher so that the students in the back of the room can properly hear what is communicated. Group work requires controlling the sound level in the room to avoid distractions and excessive noise. All speech frequencies need to be considered, low frequencies in particular.

The influence of colour

The right visual design, colours, atmosphere are decisive elements that can either enhance or inhibit the learning experience.

Colour, for instance, influences our emotions, which also affects our attention and willingness to work. Bringing in colours to a classroom is a great way to communicate the intended purpose of the space. For example, matt, soft and warm colours have been known to help concentration levels. Why not combine this with acoustics and choose a coloured ceiling?

30.7% of the students say that they can only "pretty much" hear what is being said during class.

Danish Centre for the Teaching Environment, 2013

Acoustic regulations

Minimum performance standards (T = Mid frequency Reverberation times)

Classrooms	New build	Refurbishment
Primary schools	T ≤ 0.4 - 0.6 sec	T ≤ 0.4 - 0.8 sec
Secondary schools	T ≤ 0.4 - 0.8 sec	T ≤ 0.8 - 1.0 sec
Music	T < 1.0 sec	T < 1.0 sec
Drama studio	T ≤ 1.0 sec	T ≤ 1.0 sec

Source: Section 1, BB93 and Approved Document E (UK) and Technical Guidance Document TDG-021 (Ireland)

Solution

1. Use high-quality sound-absorbing materials within all speech frequencies, especially the low ones.

2. A 40mm tile at the perimeters of the room can help increase speech clarity.

3. Use the walls for further acoustic mitigation, to minimise echoes and to meet acoustic building requirements.

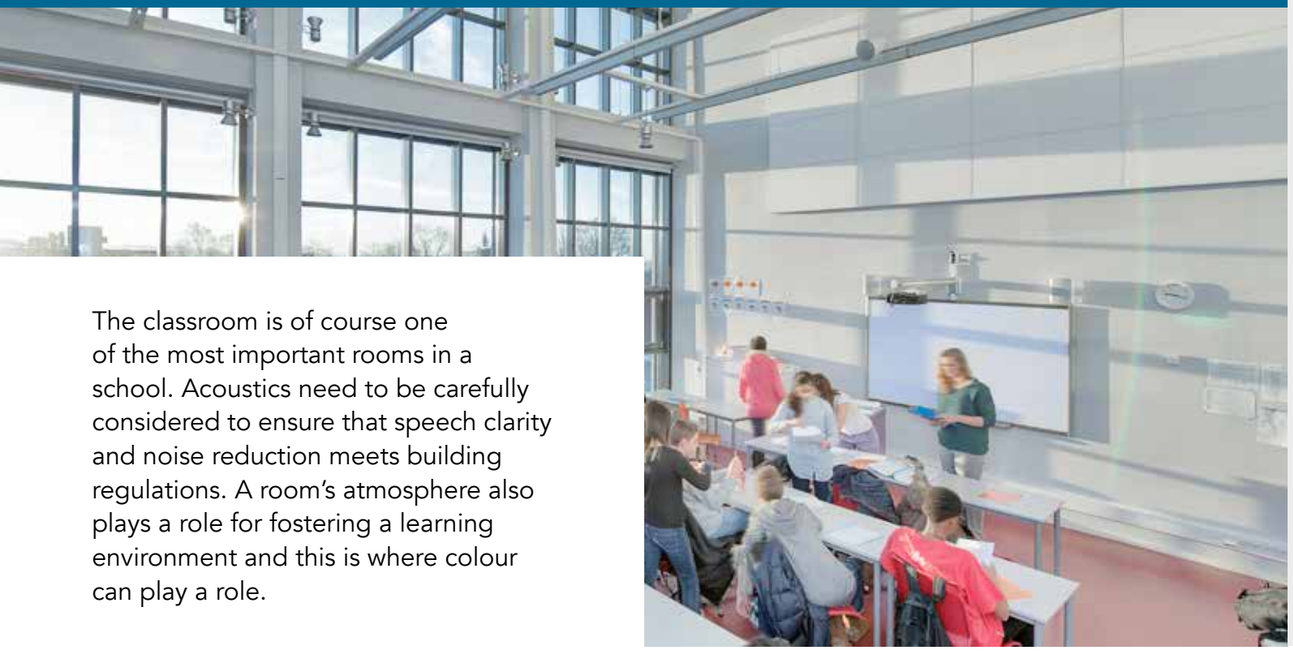
Dynamic learning

Gone are the days where teachers simply lecture students in a classroom. Now there is so much more focus on pupils acquiring skills like creative and design thinking, as well as developing skill sets that promote collaborating.

This spirited forum of learning puts stress on the indoor environment, enhancing the need for acoustic comfort. This new reality of learning is recognisable in many European countries, which is why building regulation requirements for schools are very stringent. In fact, in classrooms an acoustic ceiling alone is often not enough to meet the standards, which means additional acoustic corrections need to be installed on the walls.

The right products to stimulate learning

Classrooms design solutions



The classroom is of course one of the most important rooms in a school. Acoustics need to be carefully considered to ensure that speech clarity and noise reduction meets building regulations. A room's atmosphere also plays a role for fostering a learning environment and this is where colour can play a role.

Littleport Academy

Cambridgeshire, UK

Challenge:
To meet the acoustic needs within a project which comprised a pre-school, an academy and a Special Education Needs (SEN) school.

Solutions and results:
The architect used Rockfon Blanka dB 41 in the classrooms for superior speech intelligibility, helping improve the students ability to learn, think and concentrate.

CASE STUDY

Make yourself heard

Rockfon Blanka® Activity
Rockfon Blanka Activity is designed for classrooms where speech intelligibility is crucial, and noise and activity levels are very high. The thicker acoustic ceiling tile has high absorption, also for low frequencies, which makes it ideal for controlling the sound level when installed around the perimeters of the room. Its durable surface makes it resistant to dirt and everyday wear and tear, keeping the ceiling looking as bright as the day it was installed.

Here are the products we recommend

Rockfon Color-all®

Our Rockfon Color-all range comes in 34 exclusive colours of acoustic ceiling and wall solutions to inspire and enhance your interior design scheme.

Rockfon Tropic™

A cost-effective and smooth white tile which comes in a full range of dimensions in semi-concealed and visible grid options. Class A sound absorption and easy to clean with a vacuum.

Rockfon® VertiQ® wall panel

This durable wall panel is highly sound absorbent and impact resistant which can be key in busy areas of a school. It comes in different colours and can be installed both vertically or horizontally

One US study found that 50% of teachers had suffered irreversible damage to their voices due to the Lombard effect.

BUILDING IN SOUND | BIAMP SYSTEMS WHITEPAPER

Kitchen and **Cafeteria**

A place to get together

Kitchens and cafeterias serve many students every day. These areas of the school have to be large spaces, both for food preparation and in the cafeteria where students eat.

The multi-purpose - where students meet to eat, talk, hang out or work - has two very specific challenges that require thoughtful design. It needs to be both hygienic and comfortable with great acoustics.

> "Rockfon is the only one who managed to control sound and **deliver the acoustics needed** in the different rooms.
>
> **Lee Dade**
> Building and Project Leader

Design solutions for a great ambience

The cafeteria is a social hangout for much of school life that doesn't happen in the classroom. This makes the space a great area to incorporate a variety of interior design elements, like colours or shapes, which can be used to tell the story about the values or character of the school.

It's all about acoustics

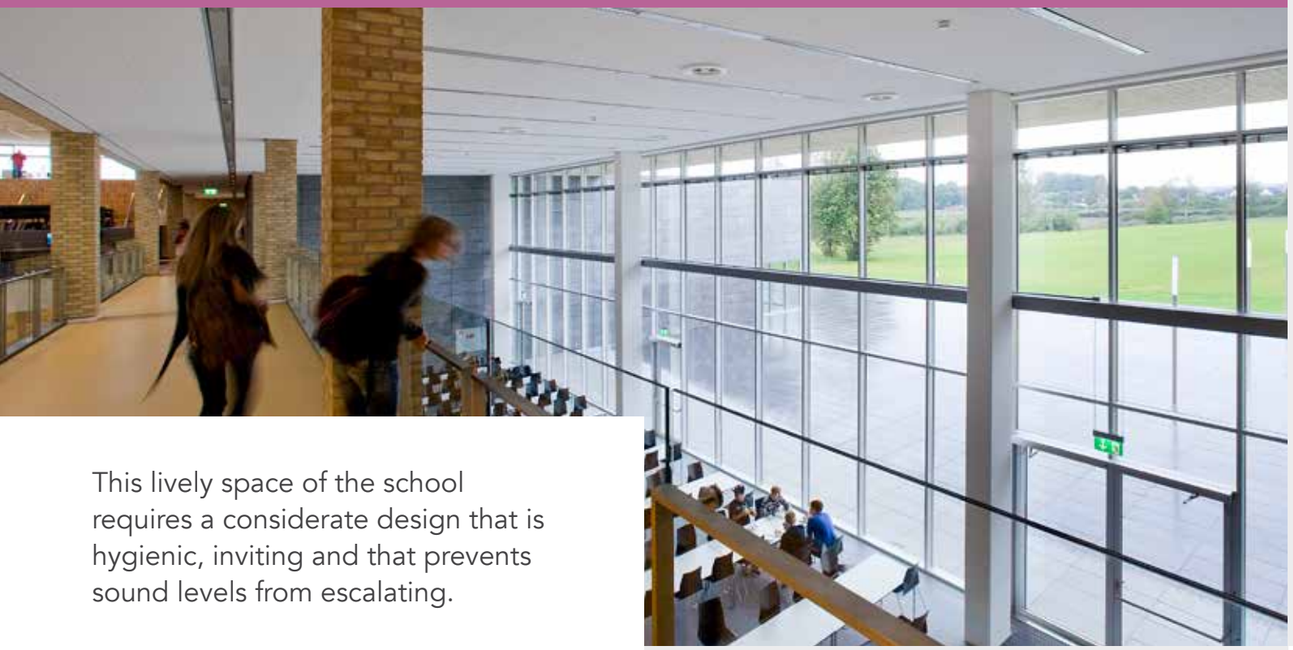
Like the hallways, the canteen is a bustling space with a lot of activity, not only used to enjoy lunch, but also to do group work and hang out. Noise levels can be very high due to the number of people gathered together. Unwanted sounds can spread to other areas of the school if the acoustics are not considered.

A hygiene friendly zone

Like any area where food is prepared, hygiene is a key concern. It is vital in these spaces that the building materials, including the ceiling, can be cleaned and disinfected regularly. In addition, without proper sound absorption, noise will reflect on the hard surfaces and create a noisy and stressful environment.

Have great hygiene that sounds right

Kitchen and Cafeteria design solutions



This lively space of the school requires a considerate design that is hygienic, inviting and that prevents sound levels from escalating.

Here are the products we recommend

Rockfon Color-all®

Our Rockfon Color-all range comes in 34 exclusive colours of acoustic ceiling and wall solutions to inspire and enhance your interior design scheme.

Rockfon Eclipse®

Rockfon Eclipse is a beautiful, frameless acoustic island that comes in a variety of geometric shapes. They are perfect for improving sound absorption in combination with a fun design.

Acoustic regulations

Minimum performance standards
(T = Mid frequency Reverberation times)

Cafeteria & kitchens	New build	Refurbishment
Dining room	T ≤ 1.0 sec	T ≤ 1.5 sec
Kitchen	T ≤ 1.5 sec	T ≤ 2.0 sec

Source: Section 1, BB93 and Approved Document E (UK) and Technical Guidance Document TDG-021 (Ireland)

Solution

1. Use sound-absorbing solutions that meet the most rigorous hygiene codes and safety regulations and that are resistant to mould and bacteria.

2. Use highly sound-absorbing ceilings and wall solutions to control the noise levels.

3. Play with the design of the ceiling and walls to create a warm and inviting atmosphere in this large space.

Walworth Academy

London, UK

Challenge:
With over 1,000 pupils in the school, the exposed concrete in the open plenum design of the dining hall was an acoustic challenge.

Solution and results:
Rockfon ceiling islands were installed to create a cost-effective, contemporary image for the space whilst meeting stringent building regulations.

CASE STUDY

Keep it clean and sanitary

Rockfon® Hygienic™
Rockfon Hygienic is a non-hygroscopic, durable and specially treated ceiling tile which is perfect for food preparation areas that require frequent cleaning.

By choosing a ceiling solution that is resistant to mould and bacteria, you ensure a safe space.

Gymnasiums

The perfect place to be active.

Gymnasiums are probably the loudest rooms in a school. In this large open area, you will find excited students shouting, gym equipment ricocheting off the floors and walls and teachers trying to be heard through it all. This cocktail of noise has a detrimental effect, both on the children and teachers.

Acoustic regulations

Minimum performance standards
(T = Mid frequency Reverberation times)

Gymnasiums & multi-purpose halls	New build	Refurbishment
Gymnasium	T ≤ 1.5 sec	T ≤ 2.0 sec
Swimming pool	T ≤ 2.0 sec	T < 2.0 sec
Multi-purpose hall	T = 0.8 - 1.2 sec	T = 0.8 - 1.5 sec

Source: Section 1, BB93 and Approved Document E (UK) and Technical Guidance Document TDG-021 (Ireland)

Solution

1. Use acoustic sound-absorbing solutions that meet the requirements for impact resistance.

2. Use both the ceilings and walls to enhance sound absorption and increase speech clarity.

3. Combine with a suspended grid solution specially designed for impact areas.

Keeping a healthy indoor environment

Gymnasiums are renowned for their poor indoor comfort if the proper acoustic treatments haven't been thought into the design. These areas, because of the energy and movement, very easily create an intolerable Lombard effect, which inevitably causes everyone to speak louder - fighting against the noise, just to be heard. This has a negative influence on the physiological and psychological wellbeing of students and teachers.

Robust acoustic solutions

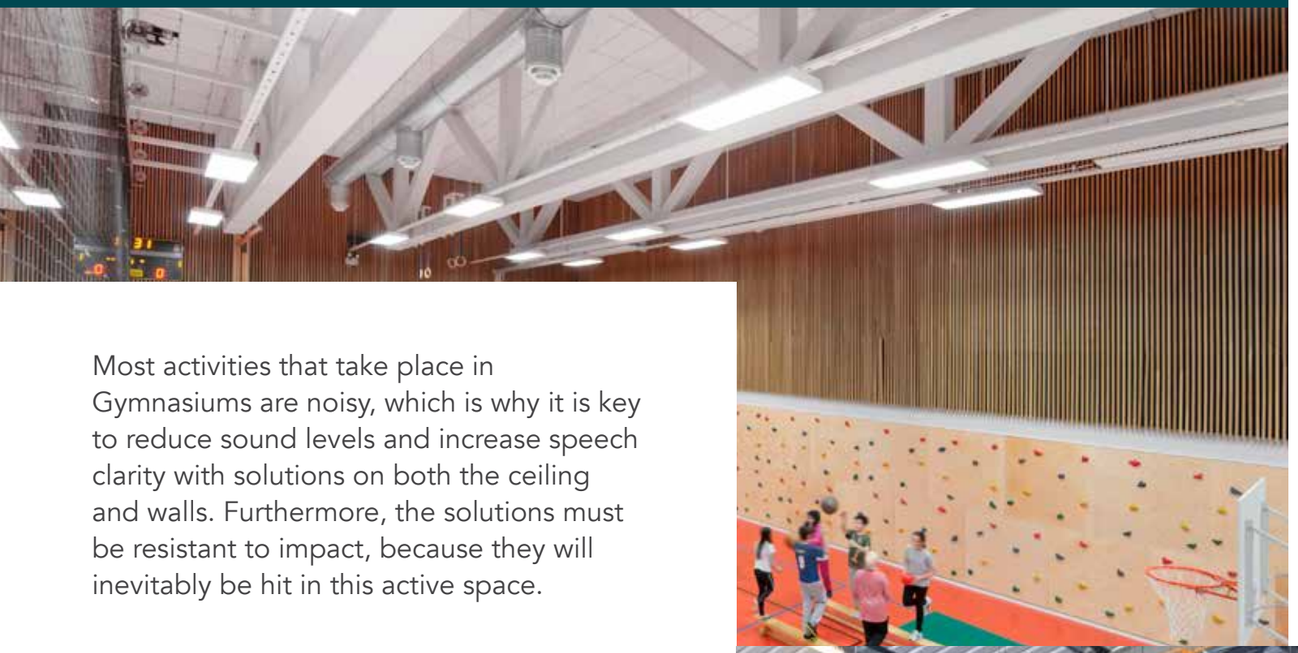
The rough and tumble areas of the school need great acoustics, but what's more, these spaces also require acoustic ceiling solutions that are robust and can withstand an impact without being damaged.

Exposure to noise polluted rooms can hurt a child's speech, listening and reading ability, their concentration and memory.

Allen, J. G, et al 2017.

Carefree play and comfort

A robust and comfortable indoor environment



Most activities that take place in Gymnasiums are noisy, which is why it is key to reduce sound levels and increase speech clarity with solutions on both the ceiling and walls. Furthermore, the solutions must be resistant to impact, because they will inevitably be hit in this active space.

Here are the products we recommend

Rockfon® VertiQ® HAT A Wall™ Panel

Attractive and impact resistant, highly sound-absorbent wall panels ideal for sports halls. These are available in four colours.

Rockfon® Boxer™

Rockfon Boxer is a highly impact-resistant tile ideal for sports halls. It has excellent sound absorption properties also in the low frequencies.

Built to take a hit

Rockfon® System OlympiaPlus A Impact 1A™
This unique high impact resistance grid system safeguards your acoustic solution. Combined with a selction of our acoustic tiles this system lets you regulate the noise levels in gymnasiums without having to worry about impact damage.

Compatable with our Rockfon Samson and Rockfon Boxer acoustic ceiling tiles, this system can be either suspended from the ceiling or installed on the wall. Rockfon System Olympia Plus meets the requirements of maximum impact resistance (Class 1A).

CASE STUDY

Kings Heath Boys School

Birmingham, UK

Challenge:
No acoustic treatment had been built into the sports hall which made it almost unusable because of very excessive reverberation times.

Solutions and results:
300m2 of Rockfon VertiQ Hat A wall panels were fitted around the perimeter which halved the reverberation time, increasing speech intelligibility and making the space feel much calmer.

Changing and **shower rooms**

Changing rooms in schools are made up of many hard surfaces which is good for cleaning and hygiene purposes, but not for noise. To help offset this challenge, it is important to look for acoustic ceiling solutions that will dampen sound reflection, whilst being able to withstand the humid environments found in these spaces.

> "Speaking louder to be heard continuously **escalates the noise and makes a room even noisier**. This is known as the "Lombard effect".
>
> **Pascal van Dort**
> Global Acoustics Ambassador

Acoustic design tips

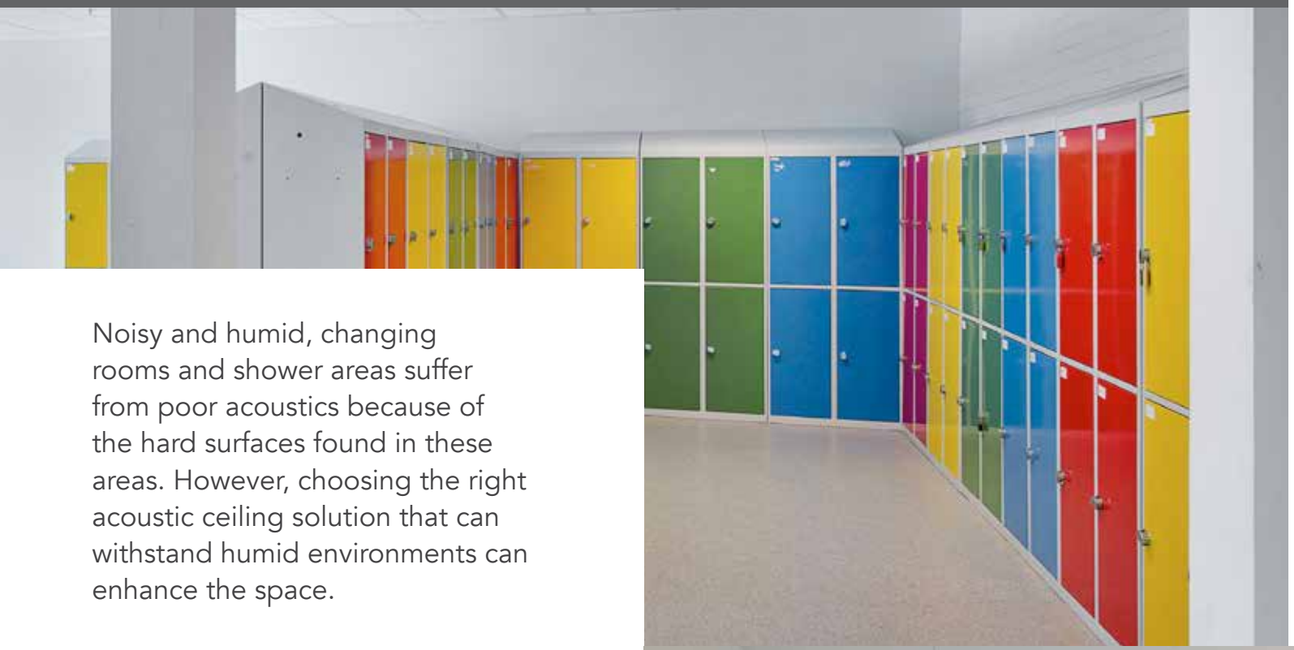
1. Use acoustic solutions that can withstand humid environments, which won't sag over time and which doesn't contribute to mould or bacteria build-up.

2. Make sure sound absorption is high to avoid sound bouncing off the surfaces.

Resist the humidity
Moisture often builds up in naturally "wet" rooms like changing rooms and shower areas, which can be tough on the material in the room. High humidity can weaken the structure of certain ceiling panels, causing them to lose shape and sag over time. It can also expose students to harmful damp conditions. Our ceiling panels are dimensionally stable up to 100% relative humidity—eliminating the risk of sagging, warping or breaking.

Humid environments

Changing and show rooms design solutions



Noisy and humid, changing rooms and shower areas suffer from poor acoustics because of the hard surfaces found in these areas. However, choosing the right acoustic ceiling solution that can withstand humid environments can enhance the space.

Here are the products we recommend

Rockfon® Koral™

Rockfon Koral is an attractive white, micro-textured surface that has the highest sound absorption rating. This easy to clean acoustic ceiling solution is a practical and affordable choice.

Rockfon® Scholar™

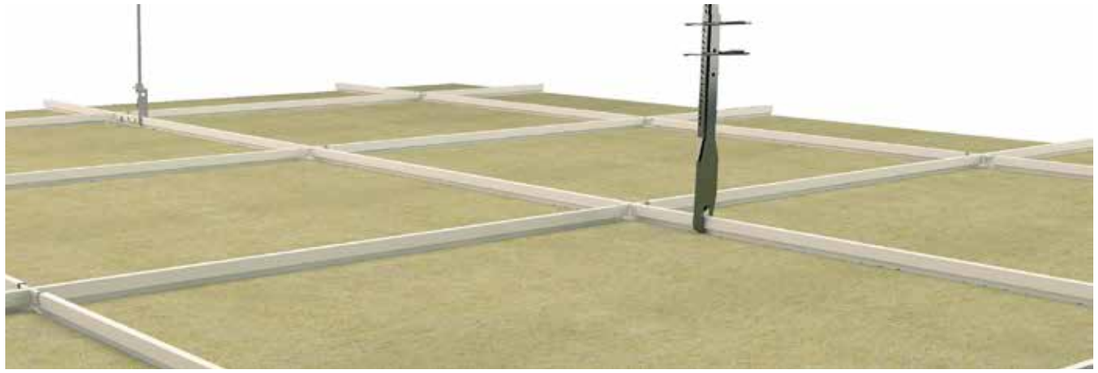
Rockfon Scholar has Class A sound absorption plus durable edges which remain intact even when removed and reinstalled regularly.
A straightforward, cleanable and popular solution.

Chicago Metallic™ ECR Class D grid

Povides enhanced corrosion resistance in humid areas.

An enhanced corrosion resistant solution

Rockfon® System T24 A, E - ECR™
Rockfon System T24 A/E ECR is a ceiling system suitable for humid and harsh environments such as locker rooms and shower areas where corrosion resistance, longevity and safety are key factors. Combined with our stone wool tiles, you have a solid, durable solution. The ECR Class D grid components are made of prepainted galvanised steel Z 275, meeting the highest Class D corrosion resistance requirements of EN13964. The system accessories are produced with the same level of corrosion resistance protection.



Ørestad Skole

Ørestad, Denmark

Challenge:
When the newly established Danish city of Ørestad commissioned the architects at KHR Arkitekter to design a school - they were looking for one that would ensure the building's stature as the modern city's social and cultural focal point that had a comfy indoor atmosphere.

Solutions and results:
The architects delivered a modern school building where the acoustic ceiling played a vital role in providing a calm atmosphere in a busy environment. Minimising distractions and noise, as well as choosing durable solutions, was key for KHR Arkitekter.

CASE STUDY

School **product specs** and **where to use them**

Let's take a final look at the products and rooms that you've just seen

Properties	Rockfon® Blanka®	Rockfon Blanka® Activity	Rockfon Color-all®	Rockfon® Tropic™	Rockfon® VertiQ® HAT A Wall™ panel	Rockfon® Scholar™	Rockfon® Hygienic™
Sound absorption	α_w: up to 1.00 (Class A)	α_w: 1.00 (Class A)	α_w: up to 1.00 (Class A)	α_w: up to 1.00 (Class A)	α_w: up to 1.00 (Class A)	α_w: up to 0.95 (Class A)	α_w: 1.00 (Class A)
Surface durability	Enhanced durability, dirt resistance, and wet-scrub resistance	Enhanced durability, dirt resistance, and wet-scrub resistance	-	-	-	-	Enhanced durability, dirt resistance
Impact Resistance	-	-	-	-	Rockfon System VertiQ® HAT A wall	-	-
Light reflection	87% light reflection >99% light diffusion	87% light reflection >99% light diffusion	Colour-dependent	86%	72%	86%	85%
Cleaning	Vacuum - Damp cloth	Vacuum - Damp cloth	Vacuum	Vacuum	Vacuum	Vacuum	Vacuum - Damp cloth, Cleaning*
Hygiene	Stone wool provides no sustenance to microorganisms						
Humidity and sag resistance	Up to 100% RH. No visible deflection in high humidity C/0N						
Reaction to fire	A1	A1	A1	A1	A1	A1	A1
Environment	All products are recyclable						

*Dry steam (twice a year), Low pressure foam, High pressure, Chemical

The right product in the right space

Getting your school design to sound as good as it looks starts by **understanding the challenges each room-type faces**. Please have a look at our overview to see what considerations need to be taken in each space, and what products we recommend to create a comfortable environment for students and teachers.

1 HALLWAYS AND BREAKOUT AREAS

Noise control

- Rockfon® Blanka®
- Rockfon® Scholar™

4 CAFETERIA AND KITCHEN

Noise control & Hygiene

- Rockfon Color-all®
- Rockfon Eclipse®
- Rockfon® Hygienic™

2 OFFICE AND ADMINISTRATION

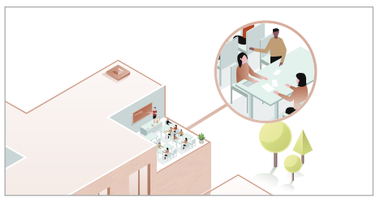
Sound insulation & Privacy

- Rockfon dB
- Rockfon® Tropic™

5 GYMNASIUMS

Noise control & Impact resistance

- Rockfon® VertiQ® HAT A Wall™ panel
- Rockfon® Boxer™



3 CLASSROOMS

Speech clarity & Reducing noise

- Rockfon Blanka® Activity
- Rockfon Color-all®
- Rockfon Tropic™
- Rockfon® VertiQ® wall panel

6 CHANGING AND SHOWER ROOMS

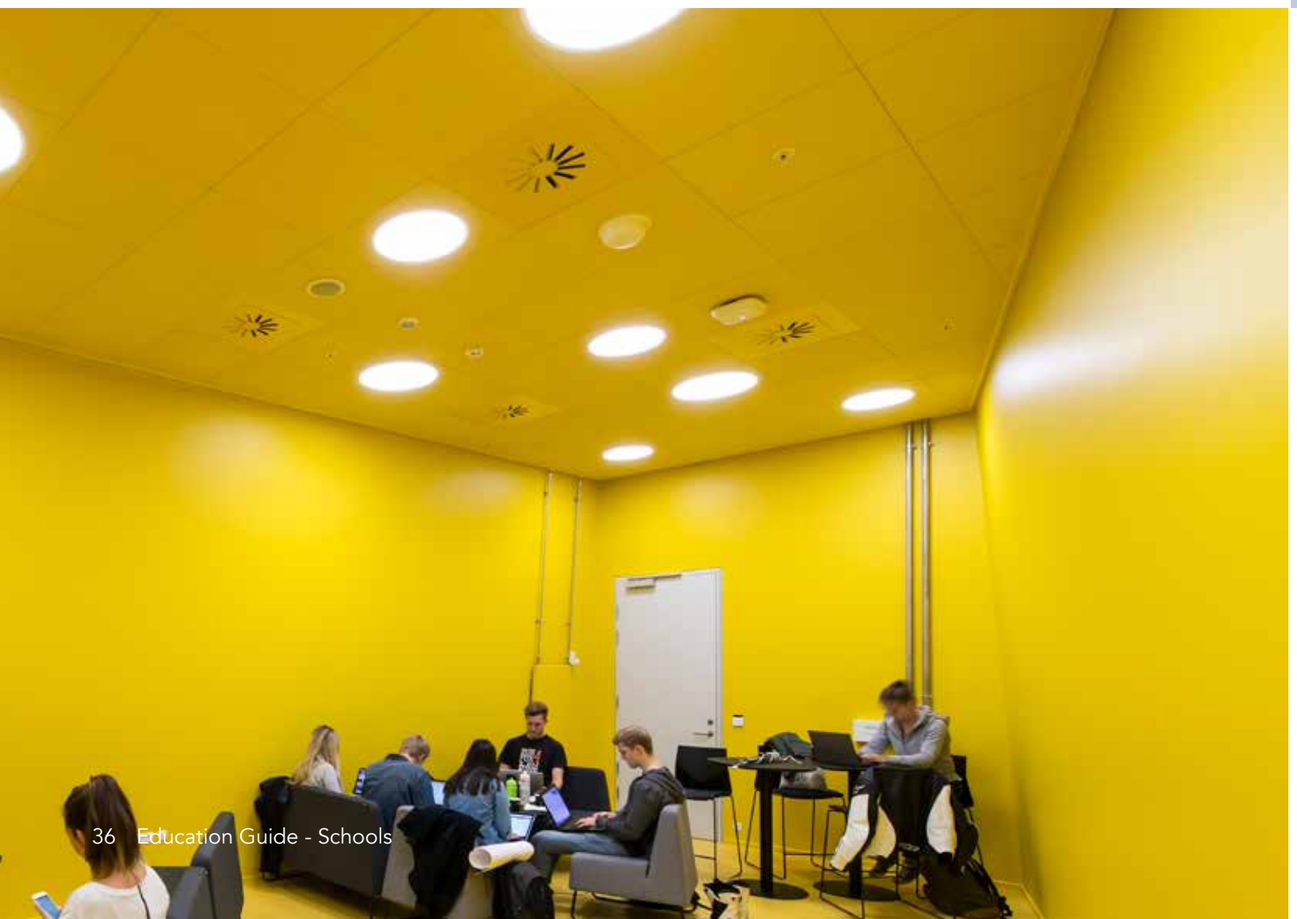
Reverberation & Humidity

- Rockfon® Scholar™
- Rockfon® Koral™
- Chicago Metallic™ ECR Class D grid and components

The influence of **Rockfon Color-all®**

Want to enhance wellbeing and ambience by using colour? Our coloured ceilings and wall solutions don't just reduce noise; they also help create unique spaces. The range comes in 34 exclusive colours, that can inspire and enhance your interior design, giving you many possibilities to set the mood in the classroom.

- Choose from everything from subtle to bold long-lasting colours
- An extensive range of semi-concealed and concealed edges in a large variety of module sizes
- Bring a splash of colour to the walls and set the tone for the classroom to make your design standout



The resistance of **Rockfon® VertiQ® wall panel**

Attractive and impact-resistant, the highly sound-absorbent acoustic wall panels complement our ceilings to ensure building regulations are met. Its versatility makes it at home in classrooms, hallways and gymnasiums.

- Make sure acoustic building requirements are met by also adding wall panels to your school design
- Bring some durable colour to your walls and choose from a variety of shades like white, light grey, grey and black
- Create a pattern by installing your wall solutions either horizontally or vertically

The power of **Rockfon Blanka®**

Its super-white surface, with its high light reflection and light diffusion, creates a comfortable indoor environment with exceptional acoustics. The range comes in multiple dimensions and edges for full design flexibility. It's available in different thicknesses, making it optimal for schools, where sound needs to be optimised for all speech frequencies.

- Perfect for sound control in all speech frequencies
- Enjoy maximum natural brightness, with 99% light diffusion
- Contribute to energy savings of up to 23%.
- Choose a durable product that will look as good as the day it was installed.

The strength of **Rockfon® Samson™**

The high impact-resistant woven surface is ideal for high activity areas such as schools and sports facilities. It's very high sound absorption ensures that noise is controlled in busy areas like sports halls.

- Get the best in class sound absorption for noisy and reverberant areas
- Choose to protect your acoustic ceiling solutions with documented impact resistance
- Be safe with the safest reaction to fire rating on the market

We are your **sustainability** partner

Sustainability sits at the heart of our research and development. It's why we use natural stone, constantly reduce our carbon footprint and recycle to look after our planet and our people.

Schools are continuously being renovated, adapted or extended, impacting the environmental footprint for building materials. Luckily for us, stone wool is a fully sustainable closed-loop product. It can be recycled again and again without any degradation in quality.

Rockfon is able to both recycle our own old stone wool ceiling tiles plus upcycle wet felted mineral fibre ceiling tiles from other manufacturers.

Visit our webpage for more information about our takeback scheme.

159 000 tonnes of stone wool were collected for recycling in 2019.

CASE STUDY

Lyceum Schravenlant

Rotterdam, Holland

Challenge:
The Dutch High School Lyceum Schravenlant is the first educational building in the Netherlands designed and built after the cradle-to-cradle principles. That means that the school must be completely demountable at the end of its life cycle and the materials are given a new life as different products.

Solutions and results:
To meet this eco-friendly school building, LIAG architecten wanted a healthy acoustical atmosphere. "A building is only sustainable if it contributes to the primary goal of its existence – in this case, education. In that sense, a healthy indoor climate is a must," says Thomas Bögl of LIAG architecten. The result is a comfortable and sustainable school which is future-proofed to easily accommodate the adaptation of new techniques and the flexible division of rooms.

Be part of making the world sound better to everyone

Get started today

Rockfon is part of the ROCKWOOL Group and we are the world's leading acoustic company – and our mission is to keep things quiet.

We're the shh in thoughtful classrooms
Every day we are inspired to innovate with sound solutions that help people think, concentrate and enjoy life more. Our acoustic solutions do more than reduce noise, they also create calmer, healthier buildings for students and staff.

We're here to help
We have 22 offices and 9 manufacturing facilities worldwide and we're on hand to help you find the right acoustic solutions for your next school project.

We are your sustainability partner
Our high-quality products are made from natural stone. They work, they're beautiful and they last – until they're recycled to make more. And we provide all the necessary documentation to support you in creating a sustainable school project.

Our online resources
Explore our website for sound calculations, instruction videos, documents, and a comprehensive BIM library with objects compatible with ArchiCAD and Revitt. Speed up your design processes with this free to use support on:

www.rockfon.co.uk

Let's connect

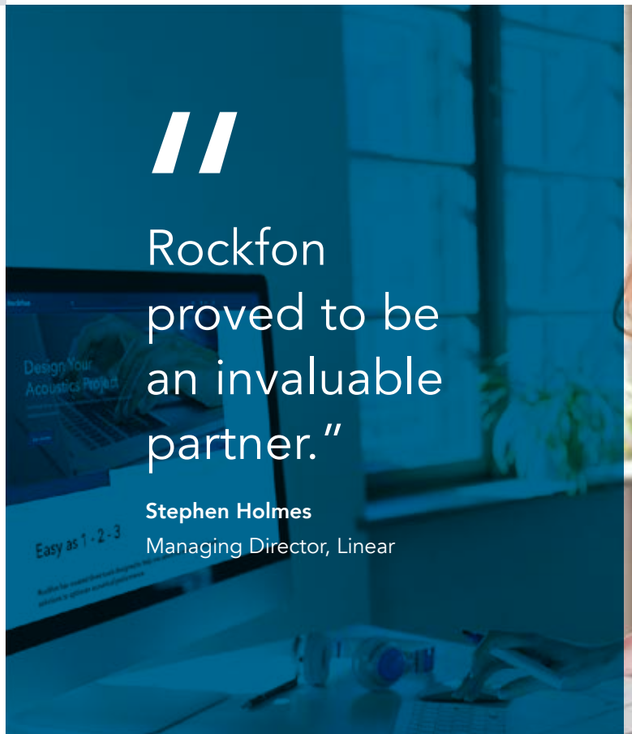
Give us a call whether you need advice on getting the right acoustic environment for your project, want to hear more about one of our products or just need technical support.
We're here to help.

020 8222 7457

- Talk to an expert
- Order samples
- Mon-Fri 08.00-17.00

info@rockfon.com

www.rockfon.co.uk



"Rockfon proved to be an invaluable partner."

Stephen Holmes
Managing Director, Linear

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