SCHOOL ACOUSTICS

Natural Acoustics
THE WOOLLY SHEPHERD

The Woolly Shepherd Ltd

“We would never teach reading in a classroom without lights. Why then would we teach in ‘acoustic darkness’? Speaking to a class, especially of younger children, in a room with poor acoustics, is akin to turning out the light.”

Professor John Erdreich (Fellow Acoustical Society of America)

ACOUSTICS

Acoustics in the school environment are often overlooked, yet it is so important to a child's understanding, learning and wellbeing, as well as that of the teachers and staff.

"Teaching and learning are acoustically demanding activities, however a great number of classrooms in England and Wales have poor acoustics. Good classroom acoustics enhance teaching and learning, improve student behaviour and reduce the risk of vocal strain for the teacher. But many schools were not built with due regard for the quality of classroom acoustics."

National Education Union.

POOR ACOUSTICS

Poor acoustics in school classrooms can be very challenging for deaf children because hearing aids and cochlear implants cannot cut out background noise. They amplify all noises in a classroom, not just the teacher's voice, this means that a deaf child may miss out on a lot of the words spoken by their teacher.

Adults can fill in the blanks of missed information only if they have that information already stored in their memories and they can retrieve it. Because children don't have those memories, they need a sharper acoustic signal than adults do. While a classroom might sound fine to an adult, it may be inadequate for a child who is less developed or who has not had years of language and life experience. All this means that children require a quieter environment and a clearer acoustic than adults do in order to learn.

REVERBERATION

Reverberation occurs when the sound from the source has stopped, but reflected sound continues in the room. If the surfaces have a low absorbency (i.e. they are reflective) then the sound may bounce around the room, arriving at the child's ear at different times, blurring the sound and making it difficult to listen to and understand. The longer the reverberation time the more 'blurred' the sound. This makes a short reverberation time of critical importance, given its huge effect on learning.

ACOUSTIC TREATMENT

Research has shown that improving the listening environment in educational settings will:

- improve learning and retention of information for all children, especially those who have a hearing impairment or a temporary hearing loss (for example, because of glue ear) or other additional learning needs
- improve pupil behaviour
- reduce teacher absences
- ensure that any existing hearing technology is effective.

Pupils access an essential part of their learning by hearing and retaining what the teacher says and through conversations that take place in the class. It therefore follows that the poorer the listening environment, the less pupils are likely to learn and retain information

SUSTAINABLE DESIGN

At Woolly Shepherd we take sustainable development very seriously and ensure that its strands run through every part of our business. In 2019 this was formally recognized by the Institute of Acoustics who awarded us their first ever Sustainable Design Award. Our 100% natural fibre acoustic clouds and panels absorb sound, reduce reverberation and improve indoor air quality. This creates healthier more productive spaces that support both staff and students in achieving their full potential.

For more information on our products or to discuss an acoustic survey for your school, please don't hesitate to contact us.

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