

## Improving room acoustics

Research shows that children cannot listen, concentrate and learn if they are distracted by background noise. Research suggests that adults grossly underestimate the difficulties children have with listening in noise and how damaging it can be to their learning. This is because adults have developed good listening skills and are not as bothered by background noise. Children, as young inexperienced listeners, do not have these skills and need a quieter environment to learn in than adults do.

Outlined below are some suggestions for improving listening conditions in schools and settings. A few small changes could make a massive difference. Please be advised that any changes made must comply with Health and Safety and Fire Safety regulations. If you have any additional suggestions, please let us know and we will add them to the list.

**As a general principal, hard and shiny is your enemy and soft, squidgy and absorbent is your friend.**

Issue	No cost	Low cost	High cost
<b>Background Noise</b>	<p>Ask your local Educational Audiologist or Teacher of the Deaf to carry out an informal noise audit</p> <p>Manage the timetable effectively eg don't have quiet time at the same time as trumpet lessons which take place in an adjacent room</p> <p>Work with neighbouring rooms to improve noise levels for all eg ask for trumpet lessons to take place elsewhere or PE lessons to happen further away in the building</p> <p>Close doors to corridors / halls etc</p> <p>Close windows to outdoor noise</p> <p>Close room patricians during small group sessions when many groups are working in the same area eg during phonics.</p>	<p>Ask your local Educational Audiologist or Teacher of the Deaf to carry out an informal noise audit</p> <p>Maintain heating, air conditioning and other electrical systems to ensure they function within acceptable noise levels</p> <p>Mend rattling doors by fitting fire resistant strips in/around doors</p> <p>Attach strips to the bottom of doors to help stop the transfer of noise between rooms</p>	<p>Employ a qualified acoustician to carry out a noise audit</p> <p>Replace single glazed window with double glazed or triple glazed window if the noise is persistent. This can be internal as well as external</p> <p>Lower high ceilings</p> <p>Acoustic tiles to ceilings and walls.</p>

	<p>Ensure that any additional staff in the classroom are quiet eg not talking to each other, being quiet while preparing activities or displays</p> <p>Encourage children to wear indoor shoes</p> <p>Encourage children to use their 'indoor voices'</p> <p>Encourage quiet movement along corridors</p> <p>Introduce strategies that encourage children to value quiet and listening</p> <p>Ask children and young people what noises annoy them and include them in improving the listening environment</p> <p>Turn off IT equipment if it is not being used</p> <p>Turn off the TV if it is not being used. The pictures as well as the sound can be distracting</p> <p>Turn off music if it is not part of an organised, planned activity otherwise it will merge in to general background noise</p> <p>Use headphones with CD stories. Deaf children can have special 'silent' headphones which work with their hearing aids or direct audio input. Please speak to your Teacher of the Deaf</p> <p>Place tall bookshelves and display boards against partition walls</p>	<p>Put foam or felt inside pen boxes, trays and storage boxes to reduce clatter</p> <p>Put large painted canvases on open expanses of bare wall. These could be painted by children</p> <p>Have soft storage boxes rather than hard plastic ones</p> <p>Put pin board or cork tiles on the back of cupboards if they are not against a wall and are acting as a partition. They can then be used as display boards</p> <p>Partition areas with walls, <u>acoustic</u> curtains or doors</p> <p>Introduce plants, rugs, carpets, cushions and soft furnishings inside rooms, corridors and outside under covered areas and in 'wet' not carpeted areas</p> <p>Purchase a budget range Sound level meter to monitor sound levels within the setting. There are lots of amusing downloadable Apps which can be displayed on whiteboards eg balloons that pop</p>	
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	<p>Keep voices to a minimum if talking in the corridor – especially during lessons. Noise travels!</p> <p>Additional staff in the room should not talk to each other while children are expected to listen and concentrate during circle of focused time</p> <p>Setting up activities or lunch by additional staff can be very noisy and distracting. Is this managed well? Can the children go to a different area or place while this is happening. Can staff be quieter?</p> <p>Go to a local carpet shop and ask if they have any carpet square samples they can give you. They can be used for a variety of activities and they increase the number of soft furnishings in the room</p> <p>Have a 'NO ENTRY unless an emergency' note on the door for times when people entering the room would be very distracting to the staff and children</p> <p>Have a wallet or place to put notes/messages/letters etc outside the classroom or room so save people coming in and out to drop things off</p> <p>Seek advice from an Educational Audiologist or other Noise Specialist</p>	<p>teacher/speaker wears a microphone while they are speaking to the whole class. Their slightly amplified speech fills the room so everyone can hear equally and the teacher does not have to raise their voice. It is very beneficial for children and staff. It is generally not suitable for Foundation Stage due to the nature of their curriculum. More information can be obtained from ETHV</p> <p><b>NB Putting up a tent like structure in a classroom made of thin nylon or cotton will not provide a quiet environment in which to sit and work. Visual distractions may be reduced but noise levels inside the tent will be same as on the outside of the tent. Sound levels are only likely to be reduced if multiple layers of very thick fabric are used to cover the whole structure including the door. This would make it not only heavy but also dark.</b></p>	
<b>Reverberation (echoes)</b>	<p>Put drapes, mobiles, models and picture boards on hard plastered surfaces</p> <p>Make classroom displays as 3-D as possible or hang work as a banner or mobile</p>	<p>Introduce rugs, carpets, cushions, bean bags and soft furnishings</p> <p>Introduce leafy plants</p>	<p>Lower ceilings</p> <p>Acoustic tiles and boards can be added to ceilings and walls</p>

	<p>Create a 'soft' quiet area using large bean bags and cushions</p> <p>Redistribute soft furnishings to area which have hard surfaces</p> <p>Put film, paper, blinds or curtains on windows which are not being used.</p> <p>If the room has blinds, keep them closed or at least half closed so they cover as much of the glass as possible</p>	<p>Make classroom displays as 3-D as possible or hang work as a banner or mobile</p> <p>Vertical blinds at windows are preferable to curtains which are never drawn</p> <p>Carpet floors including halls and communal areas as sound travels</p> <p>Place acoustic fabric panels above display board level in rooms with a high ceiling</p> <p>Put pin board or soft fabric board on plastered walls</p> <p>Put covers on tables and display tables</p> <p>Use rubber mats on tables or hard surfaces. This will not only cut down the amount of hard surfaces in the room but also reduce the clatter of things coming into contact with the table</p>	
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Originally compiled by Karen Jacklin and Chris Boote ESHV June 2010, updated by Karen Jacklin and Su Burgess ETHV November 2016 and June 2020