



**LittleListeners**  
Helping young minds learn to listen

## **AUDITORY PROCESSING DISORDER: Modifications That Improve Classroom Acoustics**

*Revised from the FL Dept of Ed, Technical Assistance Paper 10967*

Noise and reverberation degrade the acoustic signal and adversely affect comprehension of spoken language. The effects are exacerbated for listeners with APD. Reducing environmental background noise and reverberation helps all children and the teacher enjoy a more pleasant listening, learning and teaching experience.

Below are some practical suggestions for improving classroom acoustics:

- External modifications
  - Landscaping (earth mounds, trees, hedges and shrubbery) can help with noise abatement.
  - Carpet exterior corridors
  - Exterior detached walls surrounding the classroom
- Ceilings
  - Acoustical ceiling tiles absorb middle and high frequency noise and can improve speech perception ability
  - Keep ceiling heights below 12 feet to reduce reverberation
  - Banners, student work, hanging plants and tapestries can also provide sound absorption.
- Floors
  - Carpeting with padding is highly effective for absorbing reverberation and dampening excessive noise from moving furniture
  - Extend carpeting to bottom edges of walls
  - Use rugs or rubberized or resilient tile on hard floors
- Windows
  - Use draperies, blinds or shades to dampen the reflective surfaces of windows
  - Double pane windows provide more protection from exterior noise
  - Hang student work and art on windows where drapes and blinds are not practical.
  - Keep windows closed
- Walls and Doors
  - Cork bulletin boards, felt or flannel boards, acoustical or fabric-covered surfaces, and/or student work are all great sound absorbers.
  - A solid core door without a window will provide the most efficient sound barrier.
  - Weather stripping can add additional noise reduction by sealing off cracks in the seams.
  - Avoid vented doors
- Seating and Furniture Arrangement
  - Stagger desks and tables to create more human barriers to sound travel
  - Use felt or rubber caps on chair, desk and table legs to reduce noise in uncarpeted classrooms.
  - Arrange furniture so that instruction occurs away from noise sources.



**LittleListeners**  
Helping young minds learn to listen

## Modifications that improve classroom acoustics – page two

- Ventilation
  - Use acoustical duct lining on supply and return ducts.
  - Use duct silencers to reduce crosstalk between adjacent classrooms.
  - Plan instruction away from the HVAC system
- Lighting
  - Avoid fluorescent lighting systems as they emit a high frequency buzz that can be disruptive.
  - If fluorescent lighting can't be avoided, change ballasts regularly to avoid the hum.
  - House lighting above acoustical tiles to reduce noise levels from the source.
- Special Purpose Areas
  - Place mobile bulletin boards and bookcases at angles to the walls to decrease reverberation in the classroom.
  - Use furniture to block noise sources such as computers, bathrooms, learning centers, etc...
  - Cover manipulative tables with fabric or plastic contact paper to dampen surface noise.
  - Line study carrels with acoustic tiles to reduce equipment noise.