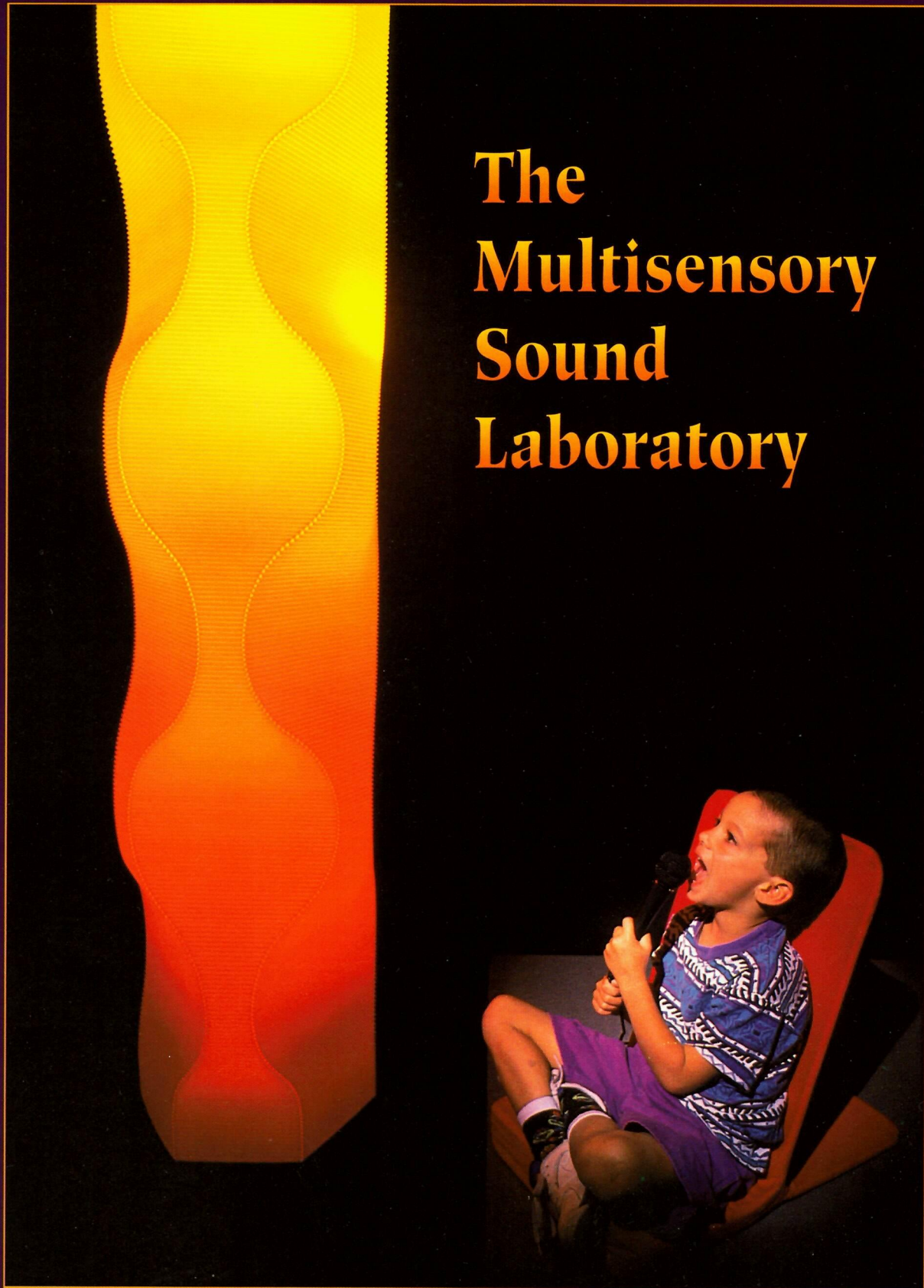


The Multisensory Sound Laboratory



*Sound should be felt and seen...
as well as heard.*

The creation of the Multisensory Sound Lab resulted from a question posed by a science teacher at Gallaudet University's Model Secondary School for the Deaf...

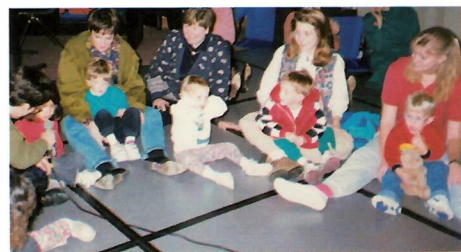
"How do I teach my deaf students what sound is if they cannot hear?"



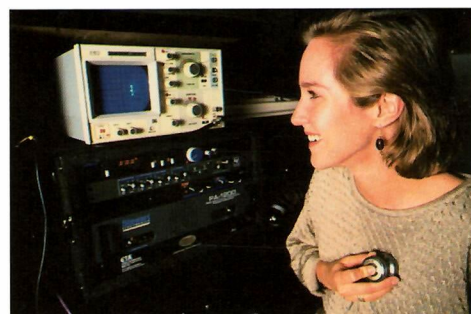
Auditory Training



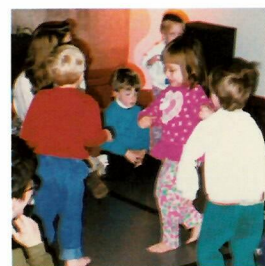
Rhythm Play with Drum Machine



Speech Therapy



Feeling-Hearing-Seeing Heartbeat with Electronic Stethoscope



Movement Activities

The Multisensory Sound Lab was initially created for teaching the science of sound to deaf students.

Over the past fifteen years, the design and uses of the Multisensory Sound Lab have expanded to include speech therapy, music instruction, occupational and physical therapy and science education for normally hearing as well as hard of hearing and deaf people.

"The Sound Lab motivates normal hearing, hard of hearing and deaf students of all ages to experiment with and learn about sound. For speech therapy, the Sound Lab provides motivating reinforcement of vocalization and speech sound production."

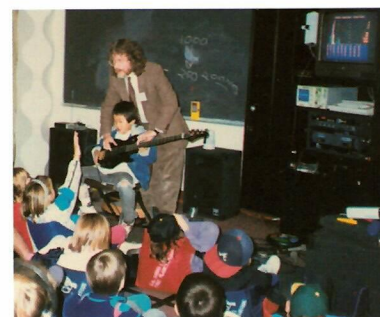
Kimberly Fisher, Ph.D., Department of Communication Disorders
University of Oklahoma, Oklahoma City

"The Multisensory Sound Lab makes acoustics concepts concrete and fun to learn!"

Bob Stoller, Fiske Planetarium/
Science Discovery Program
University of Colorado, Boulder

"Being able to experience several modes of input (auditory, tactile, visual) has allowed students with perceptual and/or learning problems the luxury of drawing upon their sensory strengths, thus compensating for their weaknesses."

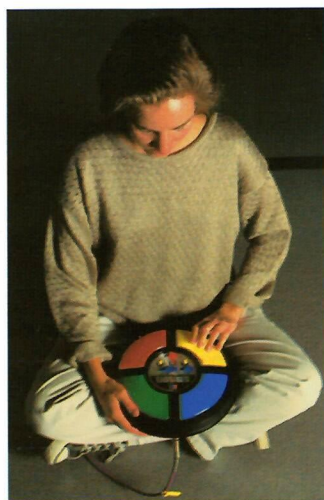
Alice-Ann Darrow, Ph.D., Art & Music Therapy Department
University of Kansas, Lawrence



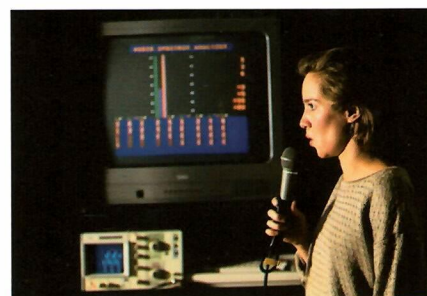
Learning about the Science of Sound



Music Therapy



Copying the Auditory, Tactile and Visual Patterns of Simon



Viewing Sound Spectrums & Waveforms

"I like the sound waves. Even though you can't see them you can feel them. Waves are really something. The whole Sound Lab was cool!"

Second grade public school student

The Multisensory Sound Lab

DEVELOPED UNDER CONTRACT WITH THE U.S. DEPARTMENT OF EDUCATION

The Multisensory Sound Lab is a very special audio system that not only amplifies sound through loudspeakers, but also simultaneously transforms sound into floor vibrations that can be *felt* through the body and *seen* by means of visual displays.

- A. LumaSound Light
- B. Laser
- C. Visualizer
- D. Oscilloscope
- E. Control Box
- F. Loudspeaker
- G. Vibrating Floor



The Multisensory Sound Lab electronically processes sound signals from microphones, musical instruments, recordings and other sources, and directs them to *loudspeakers* and a special *vibrating floor*. People sitting or standing on this floor will perceive sound as vibrations. Low to high pitch sounds will be perceived as slow to fast vibrations. High pitch sounds may be electronically transposed downward to enhance the experience. Intensity and rhythm information is also perceived through the vibrating floor.

The VISUALIZER is a spectrum analyzer that displays the harmonic content of sound on a color TV as vertical bars changing in location and height depending on the characteristics of the sound. The LUMASOUND LIGHT is a seven foot tall translucent column containing three banks of colored lights that respond to different frequency bands and intensities of sound.

Accessories for the Multisensory Sound Lab include a *laser* that displays sound as constantly changing abstract shapes projected on a wall or ceiling, and *oscilloscope*, *giant Slinky*, *tone generator*, *electronic stethoscope*, *drum machine*, *Simon*, *induction loop assistive listening system*, *CD/cassette players*, *drums* and other sound producing equipment.

"We knew that the sound lab would be a fun and highly motivating resource for classroom teachers but were surprised that it so enhanced our outreach efforts. A thousand children and adults visited the sound lab annually to learn about deafness and the properties of sound."

Paula Hendricks, M.A.
Former Director of
Education, Governor
Baxter School for the
Deaf, Falmouth, Maine



1. Unpacking the Vibrating Floor Panels



2. Laying out the Floor Panels and placing Isolation Blocks



3. Pushing the Interlocking Floor Panels together



4. Completed Vibrating Floor



5. Assembling the LumaSound Light



6. Assembled Sound and Visual Equipment



7. Fully assembled Multisensory Sound Lab in use

The Multisensory Sound Lab is a user friendly modular system consisting of interlocking vibrating floor panels, visual displays and sound producing equipment. The system is custom made to accommodate user requirements. A comprehensive assembly and user guide is provided. Please refer to price list for more information concerning ordering, shipping and assembly of the Multisensory Sound Lab. A demonstration video tape is available upon request.



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