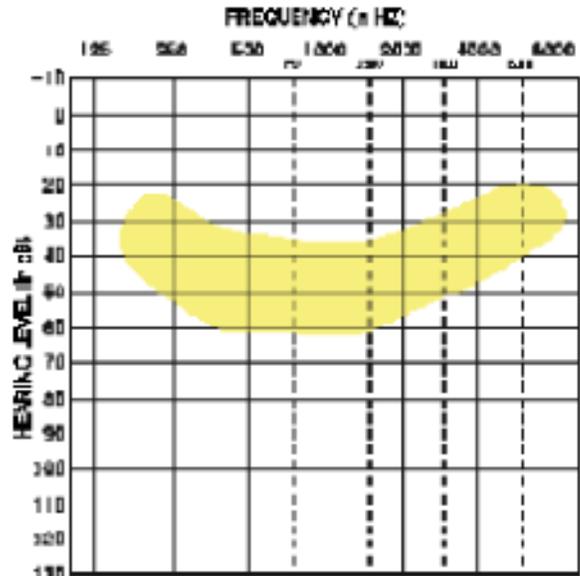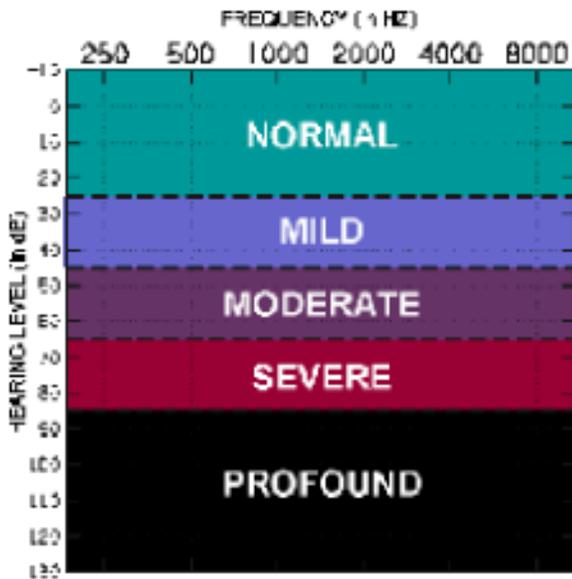## Hearing & Amplification

All About Hearing Loss

What Is An Audiogram?

shaded region shows the level and
frequency of average speech

When your baby is a bit older, the pediatric audiologist will measure his or her hearing and plot a graph called an audiogram. An audiogram is a graph used to show the softest sounds that a person can hear at different pitches.

The graph shows this range of sounds included in typical speech. Different sounds in our language vary in their pitch and loudness. For example, the "s" sound you use in the word "cats" is high in pitch and fairly soft. In contrast, the "o" sound in "bow" is low in pitch and fairly loud. The frequency and loudness of individual speech sounds are also shown on the audiogram.

Hearing is tested using earphones or loudspeakers. These send sounds to the ear canal and through the middle ear to reach the inner ear. This is known as air conduction testing.

If air conduction testing shows a hearing loss, another device, a bone vibrator, is placed behind the ear to send sounds directly to the inner ear. The sound bypasses the ear canal and middle ear.

With conductive hearing loss, sounds can be heard at softer levels with the bone vibrator than with the earphone. With sensorineural hearing loss, sounds will be heard at similar levels through both devices.

NORMAL HEARING

The audiogram to the right shows normal hearing.
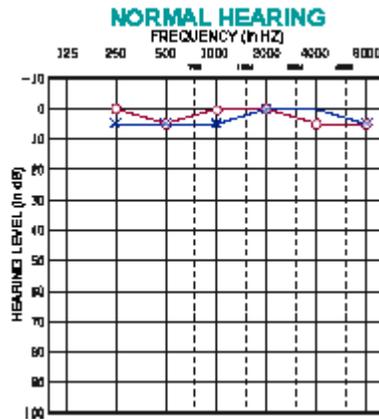
MILD HEARING LOSS

This audiogram shows a mild high-frequency hearing loss. A child with this degree of hearing loss will have trouble hearing and understanding soft speech, speech from a distance or speech in a background of noise.

MODERATE HEARING LOSS
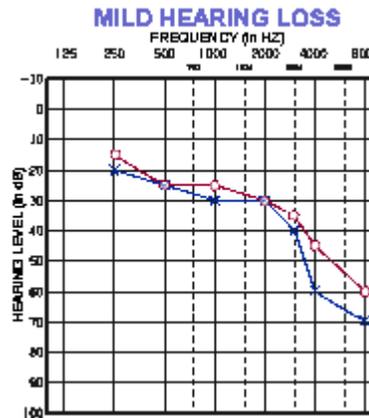
The audiogram here shows a moderate high-frequency hearing loss. A child with this degree of hearing loss will have difficulty hearing conversational speech even at close distances.

SEVERE HEARING LOSS
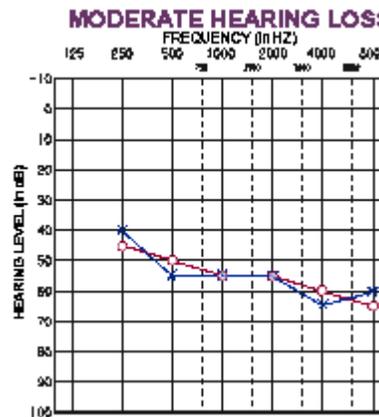
The audiogram here shows a severe hearing loss. A child with this hearing loss may only hear very loud speech or loud environmental sounds