



Question and answer period between panel and audience.

Part IV: (29:58 - 34:32)(1102-1250) Advice from panel and discussion of "Boom" cars. Wrap up.

HIP TALK was developed by the House Ear Institute and is partially funded by grants from the Mix Foundation for Technical Excellence and the National Academy of Recording Arts and Sciences, Inc.

Directed by Jeannie Bone Written by Jeannie Bone and Charlie Lahaie Curriculum Written and Developed by Dilys Jones Illustrations by Brian Wu Graphic Design by David Pascal/ D Squared Printed by The Castle Press, Pasadena, CA

- HIP Advisory Board -

Jeff Baxter Honorary Chairman Musician/Producer

Dr. John House President House Ear Institute

David A. Alpert Vice President A&M Records

Nina Blackwood Television Personality

Hal Blain Musician/Drummer

Bob Clearmountain Mixer/Producer

Michael Damien Musician/Actor

Nathan East Musician/Producer

Daniel Elfman Musician/Composer

D.J. Ennis Promotions Manager A&M Records

ENSONIQ

Michael C. Greene President, NARAS

Penny Riker Jacob Consultant

Greg Kirkland Thomas Gregor Audio Robby Krieger Musician/Producer

Larry Linkin Executive Vice President National Association of Music Merchants

Hale Milgrim President, Capitol Records

David Pack Musician/Producer

Scott Page Musician/Producer

Les Paul Musician/Guitarist

Steve J. Rawiszer Audiologist, CHDP CA State Dept. of Health Services

Hillel Resner Publisher,Mix Magazine

David Schwartz Editor-in-chief MIX Magazine

Nancy Severinsen TV & Film Music Supervisor

Alan Sides Owner Oceanway/Record One

Michael Stanley Musician/TV Personality

Jim Twerdahl Vice Chairman of the Board House Ear Institute



... HEARING IS PRICELESS

Spring/Summer 1992

Dear Educator:

The House Ear Institute and MIX Magazine are pleased to present HIP TALK !: The Hearing Is Priceless (HIP) Program, a set of multimedia educational materials on noise pollution and hearing protection. These materials are designed to supplement your regular curriculum and stimulate student awareness of the dangers of exposure to loud volumes of sound over extended lengths of time. They provide a selective overview on medical, environmental and federal concerns on the effects of noise pollution and methods of protection against hearing loss.

The materials examine the impact of over-exposure to loud sounds on the sense of hearing and the long-term side effects. They include a teacher's lesson guide, a thirtyminute videotape, a video guide and student activity sheets. Students will learn, through the narrated experiences of successful music industry professionals, the importance of hearing protection and the dangers in listening to loud music. Individuals will come to understand that practicing safe health habits should include protecting one's hearing.

HIP TALK! has been made possible by grants from the MIX Foundation for Technical Excellence and the National Academy of Recording Arts and Sciences, Inc. Ear plugs have been donated by Howard Leight Industries.

Your opinions on these materials are invaluable to us. We invite you to fill out the enclosed teacher evaluation. Your responses will direct us in developing future programs for the classroom.

Please use the educational materials in ways that are appropriate for your class. We hope you find them useful and look forward to hearing from you. For further information please call Dilys Jones or me at (213) 483-4431.

Sincerely,

のないないの

Charlie Labore

Ms, Charlie Lahaie Director, HIP Campaign House Ear Institute



المتلكة والمتداد والمراجع والمتحر والمتحر والمتحر والمتحر والمحمد والمحمد

HOUSE LAR INSTITUTE HON-PROFIT SPONSOR

CO-SPONSORED BY HIP ADVISORY LOARD

ILIF BAXTER HONORARY CHAIRMAN MUSICIAN/PRODUCER

PA JOHN HOUSE PAESIDENT HOUSE EAR INSTITUTE

DAVID A. ALFERT VICE PRESIDENT ALM RECORDS NINA BLACKWOOD THEVISION PERSONALITY

HALTLAIN MUSICIAN/DRUAVMER

BOB CLEARMOUNTAIN MIXER/PRODUCER MICHAEL DAMIEN MUSICIAN/ACTOR

NATHAN EAST MUSICIAN/FRODUCER

PANILLELIMAN MUSICIAN/COMPOSER D). ENNIS PROMOTIONS MANAGER AGM RECORDS

ENSOHIQ MICHAEL C. CREENE PRESIDENT, NAKAS

PENNY RIKER JACOB CONSULTANT

GAIG KIRKLAND THOMASCRIGOR AUDIO ROJSY KRIEGER MUSICIAN/PRODUCER

LARRY LINKIN EXECUTIVE VICE PRESIDENT NATIONAL ASSOCIATION OF MUSIC MERCHANTS

HALLMILGRIM PRESIDENT, CAPITOL RECORDS DAVID PACK MUSICIAN/PRODUCER

SCOTT PAGE MUSICIAN/PRODUCER

LES PAUL MUSICIAN/GUITARIST

STEVEL RAWIFZER AUDIOLOGIST, CHOP CALIE, STATE DEPT, OF HEALTH SERVICES

HILLEL REINER PUBLISHER MIX MACAZINE

DAVID ICHWARTE Editor-In-Chili Mix Macazini

NANCT SEVERINSEN TV & FILM MUSIC SUPERVISOR

ALAN SIDIS OWNER OCEANWAY/RECORD ONE

MICHAEL STANLEY MUSICIAN/TV PERSONALITY

JIM TWIRDAHL OF THE BOARD HOUSE EAR INSTITUTE

المراجع والمتحديق والمراجع والمراجع

STREAM VIN MILLER BOULT : BOULT : BON (CHE: VI) : B(OF STREATS

The House Ear Institute and MIX Magazine are proud to present **HIP TALK: Hearing Is Priceless (HIP)**, an educational program developed by physicians, educators and community leaders to complement the regular curriculum. The set of multimedia materials provides the teacher with an innovative method of educating students on the environmental issue of noise pollution and its impact on the sense of hearing.

In the HIP package you will find:

- A teacher's guide containing different segments: *Understanding How the Ear Conducts Sound * Noise and Our Environment * Dangerous Levels and Protective Measures. Each segment provides lesson information and student activities to teach pupils the significance of hearing loss, how to develop better listening habits, and reduce noise in their environment.
 - A thirty-minute videotape in a talk-show format which presents a new perspective on the presence of music in our lives. Successful musicians discuss volume control, hearing loss, and prevention measures with a teen audience.
 - A video index which helps you access segments of the tape.
 - Reproducible student activity sheets.
 - HIP campaign buttons.
 - Noise filter ear plugs.
 - An evaluation which will allow us to receive valuable feedback about the program.

(continued on next page)

This curriculum supplement is designed to:

- Improve knowledge of how noise affects everyday life.
- Promote safe listening habits.

- Generate better understanding of the sense of hearing.
- Increase awareness of noise pollution in our environment and promote abatement measures.

The House Ear Institute has made every effort to create an educational supplement that meets the highest curricula standards, and at the same time is easy to present and fun to learn. We hope that after implementing these materials appropriately for your class, you will supply us with information by returning the enclosed evaluation.

Our best wishes for a successful and enjoyable learning experience.

ALL ABOUT THE EAR - OR HOW DO WE HEAR?

There are three main parts to the ear: the outer, middle, and inner, each playing an important role in allowing us to hear sound.

The outer ear, or pinna, is the part you see. It is designed to gather sound and direct it through the outer ear canal to the eardrum. The canal efficiently collects sounds in all frequency ranges, but we only hear sounds ranging from 50 - 15,000 Hertz (Hz) with speech patterns falling in the 300 - 4,000 Hz range. Frequency is measured in cycles per second, or Hertz. The higher the pitch of the sound, the higher the frequency.

The middle ear consists of the eardrum and three tiny ear bones (hammer/malleus, anvil/ incus, stirrup/stapes) known collectively as the ossicles. The eardrum is a thin membrane stretched across the ear canal which vibrates in response to sound, converting energy in the form of sound waves to mechanical vibrations which activate the ear bones. Acting as a piston, the stirrup pushes against the fluids of the inner ear setting up vibrations which become nerve impulses in the inner ear.

The inner ear contains the snail-shaped hearing organ called the cochlea and the semicircular canals which control the sense of balance. Lining the spirals of the cochlea are more than 30,000 microscopic hair cells attached to nerve fibers, which, depending on their location in the cochlea, respond to different frequencies, allowing for discrimination of speech sounds. These cells convert the mechanical vibration from the middle ear into electrical energy which is then conducted by the hearing nerve to the brain where the signal is interpreted as sound.

(continued on next page)

Usually waves of sound pass over the tiny hairs like blackes of grass before the wind, so that they spring back into position after the sound wave passes. However, one loud blast of sound or constant exposure to huge waves of sound, can push the hair cells too far and permanent damage may occur. The high-frequency sensors in the large outer area of the cochlear are damaged first, then the damage progresses through the turns in the cochlea. Once the cells die, contact with the hearing nerve fibers is broken and a loss in a particular frequency range results. The loss is permanent as the nerves have been damaged.

مسيد ومصارحة والمجارعة والمسترك والمراجع والمراجع

1111335(0). (1111, (12) - 11(0) (2) 30 an ((0) 11; (2) 11/6, (0) (11) (12)

NOISE POLLUTION IN OUR ENVIRONMENT

More than 20 million people in the United States are exposed to dangerous noise levels that could result in hearing loss. Firemen, police officers, construction and heavy industry workers, military personnel and farmers are all exposed to high risk environments. Technology has advanced so that music played at high volumes creates risky conditions to audio and entertainment industry professionals and today's recreational activities are often carried out in very noisy surroundings.

Noise in the Workplace:

Noise is an annoying, and sometimes hazardous part of the workplace as accidents may occur through inattention or failure to hear warning signals. It can be an additional stress factor for many people working in crowded office buildings filled with the sounds of competing voices and ringing telephones.

Intensity of sound is measured in decibels (dB) and hearing loss depends on length of exposure as well as loudness or intensity. The Occupational Safety and Health Administration (OSHA) has set guidelines for the length of time a person can be exposed to various levels of loud noise beginning at 90 decibels (dBA) and not exceeding 115 dBA for continuous noise levels.

Safe Sound Level	Duration per Day
90 dB	8 hours
92 dB	6 hours
95 dB	4 hours
97 dB	3 hours
100 dB	2 hours
102 dB	11/2 hours
105 dB	1 hour
110 dB	1/2 hour
115 dB	1/4 hour or less

Experts have expressed concern that workers often disregard the hearing protection methods used in industry and the federal regulations. Noise reduction or protection through earplugs or earmuffs, are the only ways to prevent noise-induced hearing loss.

Get HIP! Hearing Is Priceless!

Recreational Noise:

No. Carles and

 $\frac{\int e^{-i\omega t} \mathbf{a}_{i}^{j} d_{i}^{j} \frac{1}{2} \frac{d\omega t}{d\omega} \frac{d\omega t}$

Since it is exposure to excessive noise over time that wears down the hair cells, we should be aware that noise does not stop when we leave the workplace. Unknowingly, we introduce more noise into our environment with power tools, audio equipment, motor engines and guns. Often we use amplified sound to mask other noise, such as traffic or voices, thereby increasing the volume level being introduced into the ear.

Some common recreational activities which pose potential hazards to our hearing include:

- Attending live music performances where sound levels often exceed 120 dB. The closer you are to the speakers, the greater the risks involved.
- Frequenting dance clubs or exercise classes where increased volume is used to create a "mood."
- Portable cassette players and personal headset stereos are capable of producing sound levels of more than 115 dB. A study shows that most people listen through their headsets at volumes of 100 dB or more.
- Audio systems and car stereos frequently blare at damaging levels.
- Electronic arcade games emit sounds ranging from 70 111 dB.
- Sports such as target shooting, speedboating, motorcross, or auto racing all pose real dangers to both participants and spectators.
- Noise levels from firecrackers at an average distance of 10 feet vary from 125 - 155 dB.
- Power lawnmowers, leafblowers, chainsaws and occupations or hobbies that involve the use of machinery such as lathes and power tools, can pose potentially hazardous situations.

Noise at Home:

Most of us think of home as a place where we can relax from the stress and noise of everyday life. But is that true? Too often sounds such as dogs barking, street traffic, and noisy neighbors disturb our peace and quiet.

Air conditioners, food blenders, vacuum cleaners, washing and drying machines, dishwashers, and automatic coffee grinders all emit noise at levels which vary from 50 dB - 72 dB which are more irritating than dangerous. Some of the early-model cordless telephones rang at a dangerous level of 140 dB at the ear.

We use noise to stimulate, attract, and divert our children:

- Rattles and squeaky toys are often used close to the infant's sensitive ears at sound levels as high as 110 dB.
- Toys imitating firearms emit explosive sounds which have been measured at 150 dB a foot away.
- The volume on musical toys such as trumpets, drums, and xylophones varies from 95 dB - 122 dB depending on the distance from the point of origin.
- Mobile toys such as vehicles and robots sound off at 82 101 dB.

These noisy toys may cause a child to equate noise with excitement and happiness. This pattern might continue throughout their life, possibly putting them at greater risk for noise-induced hearing loss at an early age.

HOW LOUD IS TOO LOUD? - HOW DOES IT AFFECT ME?

Sound is measured in a logarithmic scale of decibels (dB). This means that every increase of 10 dB measured, multiplies the intensity of the sound by ten. In other words, a sound at 80 dB is 1,000 times stronger than that sound measured at 50 dB, at 70 dB it is 100 times stronger, and at 60 dB it is 10 times stronger. A whisper is measured at 30 dB, normal conversation at 60 dB and rock music at 100 dB and up.

Hearing loss is not the only result of overexposure to noise. The ears provide a direct link to the nervous system affecting other parts of the body and the quality of life. On a temporary basis, noise has been found to increase blood pressure, change the way the heart beats, affect the rate of breathing, cause chronic headaches, disrupt sleep, cause stomach disorders and generate a general feeling of stress.

Other permanent effects might occur in the ear itself which can cause a lot of distress. The most common side effect is tinnitus, a "ringing" or "roaring" in the ears that almost everyone has experienced fleetingly. However, noise can cause this to become a permanent condition in which the ringing may become maddening. What makes this so distressing is that it happens inside your ear with no means of shutting it out! Sometimes medication or diet can control the intensity of tinnitus, but there is a very real possibility that it may never go away.

Warning signs occur after exposure to loud volumes of sound, indicating that your hearing might be at risk. These are:

- A temporary ringing or buzzing in the ears following exposure to high volume of sound.
- A slight muffling of sounds for a few minutes or hours after exposure.
- Difficulty in understanding speech. You can hear the words but you cannot understand all of them.
- Background sounds become more and more invasive over a period of time. This causes difficulty when following conversations in crowded rooms or where the acoustics are poor.

GET HIP! HEARING IS PRICELESS

Hearing loss due to noise is permanent, but it can be prevented.

How To Tell When The Noise Levels Are Dangerous:

- You have to raise your voice to be heard.
- When you are listening to a headset stereo and you cannot hear the person next to you talking in a normal tone.
- Speech around you sounds muffled or dull after you leave a noisy area.
- If you can hear the sound of your neighbor's headset.
- You have ringing in the ears after exposure to noise.

Ways to Protect Your Hearing:

المحرفة أأترا وأستعا

- Be aware of the noise level of your surroundings. Whenever possible, turn down the volume!
- Wear commercially available hearing protectors, such as ear plugs or earmuffs, when you know you are going to be exposed to excessive noise.
- Alternate a noisy activity with a period of quiet to rest your ears.
- Limit the length of time that you are exposed to noise.
- Select toys, appliances, and activities which do not pose a threat to hearing.
- If you are subjected to loud noise on a regular basis, have your hearing tested by an audiologist at least once a year.
- You can make the difference by speaking out at home, at work, or at leisure. You can inform people of the dangers of loud noise and ask them to make the difference.

Music is here to stay, make sure you hearing is too!

នៃ នា អាមាល នា មាលម្អ ទំន 54:(cio) #1 #1 34 (gi) # A1132 X Lesson 1 Circle the correct answer(s): ___ main parts to the ear. There are ____ 2 3 6 4 The outer ear gathers sound and directs it through the _____ to the eardrum. hearing nerve ear canal brain The higher the pitch of the sound, the higher the frequency. True False Circle the names of the three bones of the middle ear. anvil hammer piston saddle stirrup As sound passes through the middle ear, sound waves are changed into vibrations which move the ear bones. True False The hearing organ is shaped like a snail hammer wheel drum The sense of balance is controlled by part of the inner ear. True False There are more than _____ microscopic hair cells attached to nerve fibres in the hearing organ. 30,000 3,000 10,000 1,300 Different areas of the hearing organ respond to different frequencies. True False The hearing nerve conducts electronic signals to the brain which decodes them as sound. False True Very loud sound can damage your hearing permanently. False True When hearing loss occurs, difficulty in hearing low frequency sounds is first noticed. True False

	•
	<u>Lesson 2</u>
Circle the c	orrect answer(s):
Hearing los	is is caused by the combined effect of and high sounds loud volume time exposed low sounds
If I exercise	my ears with loud noise, they will become stronger. True False
If I cannot (urn down the volume I can protect my ears with cotton swabs headphones earplugs tissue earmuffs
Name three	activities or toys which can harm hearing.
	Truca Falsa
	True False in my ears after loud noise may mean that I have damaged my hearin Wax Itching Ringing Aching
As I get old	True False in my ears after loud noise may mean that I have damaged my hearin Wax Itching Ringing Aching er, my hearing is going to get better get worse stay the same
As I get old If someone	True False in my ears after loud noise may mean that I have damaged my hearin Wax Itching Ringing Aching er, my hearing is going to get better get worse stay the same needs to shout so I can hear them over my headset, the sound level is just right too loud too soft
As I get old If someone If I am in a 1	True False in my ears after loud noise may mean that I have damaged my hearin Wax Itching Ringing Aching er, my hearing is going to get better get worse stay the same needs to shout so I can hear them over my headset, the sound level is just right too loud too soft
As I get old If someone If I am in a r	True False in my ears after loud noise may mean that I have damaged my hearin Wax Itching Ringing Aching er, my hearing is going to get better get worse stay the same needs to shout so I can hear them over my headset, the sound level is just right too loud too soft noisy place I can protect my ears by: 1
As I get old If someone If I am in a r	True False in my ears after loud noise may mean that I have damaged my hearin Wax Itching Ringing Aching er, my hearing is going to get worse stay the same needs to shout so I can hear them over my headset, the sound level is just right too loud too soft noisy place I can protect my ears by: 1
As I get old If someone If I am in a r Hearing lose	True False in my ears after loud noise may mean that I have damaged my hearin Wax Itching Ringing Aching er, my hearing is going to get worse stay the same needs to shout so I can hear them over my headset, the sound level is just right too loud too soft noisy place I can protect my ears by: 1

- Ala and a state of the second second

•): +) : 0 (c ') : +	AMANANA	-111 <i>2</i> -2-2-2-2-2-2-2-2-2-2-2-2-2-2-2-2-2-2-			
			Lesson 1		
Circle the co	orrect answ	ver(s):			
There are	main p 2	parts to the eau 4	r. 3	6	
The outer e	ar gathers s True	ound and dire	ects it throug False	h the ear canal to t	he hearing nerve.
The	of the higher th	sound, the hig e pitch	her the frequ lower th	ency. e pitch	
The bones c	of the middl stapes	le ear are colle malleus	ctively called ossicles	the cochlea	
The bones a	ure activated T rue	l by vibration:	s created by s False	ound waves.	
The snail-sh	naped heari pinna	ng organ is cal eardrum	lled the cochlea	anvil	
The sense of	f balance is True	controlled by	part of the in False	ner ear.	
There are m	ore than	microscop	pic hair cells a	uttached to nerve f	ibres in the hearing
organ.	3,000	10,000	1,300	30,000	
The nerve e	ndings in d True	ifferent parts o	of the cochlea False	respond to the sa	me frequencies.
The hearing	nerve cond	lucts sig	mals to the b	rain where they ar	e interpreted as
souna.	sound	mechanical	electron	ic voice	
Very loud so	ound can da	amage your he	earing perma	nently.	
	Irue		False		

Lesson 2

.

Circle the correct answer(s):

 Hearing loss is caused by the combined effect of _____ and _____.

 high sounds
 loud volume

 time exposed
 low sounds

I can condition my ears by exposing them to loud sounds. True False

If I cannot turn down the volume I can protect my ears with: _____ cotton swabs headphones earplugs earmuffs tissue

Name three activities or toys which can harm hearing.

A sound measured at ______ is 100 times stronger than a sound measured at 50 dB.60 dB70 dB80 dB90 dB

After loud noise, muffled sounds mean that my ears are protecting themselves. True False

_____ in my ears after loud noise may mean that I have damaged my hearing. Wax Itching Ringing Aching

As I get older, my hearing is going to ______. get better get worse stay the same

If I can hear my friend's voice over my headset, the sound level is ______, just right too loud too soft

If I am in a noisy place I can protect my ears by:

 1.______

 2.______

 3.______

Hearing loss from noise cannot be cured. True False

Hearing loss from noise can be prevented. True False

STERCIELE (61 : 10) OF FIGE 10 STERE AD BOARD

<u>Lesson 1</u>

6

stapes

Circle the correct answer(s):

There are _____ main parts to the ear. 2 4 3

The outer ear gathers sound and directs it through the ear canal to the: brain eardrum hearing nerve

The higher the pitch of the sound, the ______. lower the frequency higher the frequency

The ossicles of the middle ear are individually named: malleus piston saddle incus

The mechanical vibrations which activate the ear bones get their energy from _____: electricity sound waves air currents fluid

The snail-shaped hearing organ is called the _____. pinna eardrum cochlea anvil

The sense of balance is controlled by part of the inner ear. True False

There are over 30,000 microscopic hair cells attached to _____ fibres in the hearing organ. tissue muscle brain nerve

It is the number of nerve fibres, rather than the location in the hearing organ, that allows us to respond to different frequencies. True False

 The hearing nerve conducts ______ to the brain where they are interpreted as sound.

 sound waves
 mechanical vibrations
 electronic signals

Excessively loud sound can damage your hearing permanently. True False

The sensors which are damaged first, affect the ability to hear _____ low frequencies high frequencies

 $= \{i_1,\ldots,i_n\}$

Lesson 2

Circ	le	the	correct	answer	(s)	:
------	----	-----	---------	--------	-----	---

Hearing loss is caused by the combined effect of _____ and _____. over exposure high tones high decibels low tones

Conditioning my ears to high volumes will prevent my hearing from being damaged. True False

If I cannot turn down the volume I can protect my ears with: _____ cotton swabs headphones earplugs earmuffs tissue

Name three activities or toys which can harm hearing.

A sound measured at 70 dB is _____ times stronger than a sound measured at 50 dB, two twenty ten hundred

Muffling sound is nature's way of protecting the ears after exposure to loud noise. True False

______ in mỳ ears after loud noise may mean that I have damaged my hearing. Wax Itching Ringing Aching

As I get older, my hearing is going to ______. get better get worse stay the same

If I cannot hear my friend talking over the music in my headset, the sound level is _____. just right too loud too soft

If I am in a noisy place I can protect my ears by:

A noise-induced hearing loss is permanent. True False

Hearing loss from noise can be prevented. True False

24554191)31/WL5523/01031/US=40342(64:0313)3///85165.00(0)//32

- 1. Glossary of HIP Talk Terms
- 2. Chart of decibel levels
- 3. Diagram of the Ear Scientific/Medical terminology
- 4. Diagram of the Ear Lay terminology
- 5. Diagram of the Ear Blank
- 6. Audiogram
- 7. Teacher Evaluation

GLOSSARY OF HIP TALK TERMS

amplifier audible audiogram audiologist audio technology auditory crash cymbal dB (decibel) ear plugs exposure filter fidelity "flying" speakers frequency gig hearing threshold hearing aids house mix mix

monitor mix monitoring system

noise-induced PA cabinets personal stereo pitch sensori-neural hearing loss sound pressure levels (SPL) sound level speech range tinnitus roadies

electrical equipment that increases audio levels able to be heard a chart plotting individual hearing ability professional hearing specialist sound technology dealing with the hearing process thinner cymbal with higher pitch units used to measure sound levels devices used for hearing protection time present in a certain environment screen clarity and trueness of sound speakers mounted above the stage unit which indicates pitch of sound live performance softest sounds one can hear electronic listening devices the level and blend of sound heard by the audience blending and setting of the volume and equalization of individual soundtracks produced by each instrument and voice used in a song sound heard by musicians from a speaker on stage system feeding mixed sound directly to musicians during performance caused by over-exposure to noise loud speakers portable stereos with headsets (e.g. walkman) high or low tones damage to sensory organ of sound or hearing nerves physical measurement of audio volume volume of sound the volume range of normal conversation levels ringing sensation in the ears crew who set up band equipment

Diagram of the Ear



©1992 House Bar Institute, All Rights Reserved.



Structure of the human right ear, cut open to show schematically the outer, middle and inner ear.

©1992 House Bar Institute. All Rights Reserved.



Structure of the human right ear, cut open to show schematically the outer, middle and inner ear.

©1992 House Bar Institute. All Rights Reserved.



21992 House Ear Institute. All Rights Reserved.

AIRPLANE



AUDIOGRAM

HIP TALK EVALUATION FORM

Please take a few moments and answer the following questions about the HIP TALK segment of the Hearing is Priceless program. Your responses will be helpful in evaluating the effectiveness of our program. Please be assured that your responses are confidential.

About how many students participated in the HIP TALK program?

What is the age range of the students who participated?

What is the grade level of the students who participated?

The following questions pertain only to the HIP TALK videotape.

Did you show the HIP TALK videotape? ____ Yes ____ No If No, skip to top of Page 2.

How well did the students understand the dangers of noise-induced hearing loss, as presented by the panel of musicians?

1	2	~	A	
not at all	-	3 somewhat	4	very muc
ow well did the s	students like the HIF	panel of musicians?		
	<u> </u>	<u>_</u>		
ot at all	2	somewhat	4	very muc
ow well do you t	hink the students id	entified with the teen audience	in the video?	
	Į			
ot at all	2	3 somewhat	4	very muc
		non antonn comment had an th	ha studante?	
hat impact do ye	ou think the Flintsto	nes cancon segment nad on tr	ie students i	
hat impact do yo	ou think the Flintsto	nes cancon segment had on tr		
hat impact do yo	bu think the Filntsto	I. 3 some Impact	<u> </u>	a lot of impac
rhat împact do ya 	ou think the Filntsto 2 nink the students ur	I. 3 some impact derstood the segment demons	4 strating how an auc	a lot of impac alot of impac
hat impact do yo mpact www.li do you ti	ou think the Filntsto	some impact	4 strating how an auc	a lot of impac ilogram is used?

t 2 3 4 not at all somewhat ve

very well

House Ear Institute

			Page 2
The following lessons.	questions pertain	only to the <u>Ear Anatomy</u> and <u>No</u>	ise Pollution
Did you give the f	Ear Anatomy lesson?	Yes No	
If yes, dld you ad	lapt the lesson in ways o	other than suggested in the instruction pac	cket?
If you place own	to to.		
ii yes, piease exp	•	· · · · · · · · · · · · · · · · · · ·	<u> </u>
Did you give the N	Noise Pollution Jesson?	Yes No	
If ves. dld vou ad	apt the lesson in ways o	other than suggested in the instruction pac	:ket?
			Yes No
lf yes, please exp	lain:		<u></u>
For each ques your rating.	stion below, circle	the number [1 through 5] that (corresponds to
Overall, how well	did you like the lesson?)	
Ear Anatomy	ل		
	not at all	somewhat	4 5 very much
Noise Pollution	<u> </u>	<u></u>	<u>↓</u>
	t not at all	2 3 somewhat	4 5 very much
How would you ra	ite the concepts present	ted in the lesson?	
Ear Anatomy			1 1
·	1 too difficult	2 3 just right	4 5 too easy
Noise Pollution			
	too difficult	2 3 just right	4 5 too easy
How would you m	to the loval of datall area	uldad2	
How would you ra	to the level of detail prov	41U0U (
саг Апатоту	1 1	2 3 turt delta	4 5
	too much	just right	not enough
	L	<u> </u>	_ !
Noise Pollution	1 "	2 3	4 5

House Ear Institute

Ear Anatomy	L I	1	1
	1 2 not at all helpful	3 somewhat helpful	4 very help
Noise Pollution	<u> </u>	1	_ <u></u>
	1 2 not at all helpful	3 somewhat helpful	4 very help
How would you ra	ate the questions in the stud	ent quiz?	
Ear Anatomy		· <u>1</u>	
	too difficult	3 just right	4 too ea
Noise Pollution	<u></u>	<u>l</u>	
	1 2 too difficult	3 just right	4 too ea
As a group, how w	well did the students like les	ison?	
Ear Anatomy	J	<u> </u>	ļ
	1 2 not at all	3 somewhat	4 Very mu
Noise Pollution			<u></u>
	not at ali	3 somewhat	4 very mu
low would you ra	te student participation?		
Ear Anatomy	J	<u>l</u>	
	1 2 poor	3 averaĝe	4 5 goo
Noise Pollution	<u></u>	<u>_</u>	Į
	poor 2	average	4 ; goo
The following (questions pertain to the	ne entire HIP TALK program.	If you did not
n what subject (i.e	a., Health, Social Studies, S	Science) did you incorporate the HIP T.	ALK program?

How long did it take you to read and prepare the HIP TALK program materials before presenting it to your students? ______ hour(s)

House Ear Institute

	2	3	4
ery long		moderately long	not long at a
low long did it take	you to actually p	resent the HIP TALK program?	hour(s)
How would you rate	the presentation	time needed for the HIP TALK program	n?
l l	2		4 f
Did any other school	l staff narticipate v	with you in presenting the HIP TALK pro	param?
	oun puniopuio		Yes No
f yes, please explai	n:		
Old the HIP TALK pro	ogram stimulate a	additional lesson plans or ideas?	Yes No
f yes, please descri	be:		
	. <u>.</u>		
Vould you consider	presenting the HI	P TALK program to your class next yea	r? <u>Y</u> es No
Vould you recomme	nd the HIP TALK		
	na na rini iriari	program to other teachers? Yes	s No
o the best of your k	nowledge, did th Yes i	program to other teachers? Yes e students talk about the impact of louc No	s No I noise or music on hearing
To the best of your k putside of class?	nowiedge, did th Yes t	program to other teachers? Yes e students talk about the impact of louc No	s No d noise or music on hearing
To the best of your k putside of class?	nowledge, did th Yes f	program to other teachers? Yes e students talk about the impact of louc No	s No d noise or music on hearing
Fo the best of your k butside of class? Your Name: Feaching Specialty: Years of teaching exp	naviedge, did th Yes f	program to other teachers? Yes e students talk about the impact of louc No	s No d noise or music on hearing
To the best of your k butside of class? Your Name: Teaching Specialty: Years of teaching exp School Name:	nowiedge, did th Yes f	program to other teachers? Yes e students talk about the impact of louc No	s No d noise or music on hearing
Fo the best of your k butside of class? Your Name: Feaching Specialty: Years of teaching exp School Name: School Address:	nowledge, did th Yes f	program to other teachers? Yes e students talk about the impact of louc No	s No d noise or music on hearing
o the best of your k butside of class? four Name: eaching Specialty: fears of teaching exp school Name: ichool Address:	naviedge, did th Yesf	program to other teachers? Yes e students talk about the impact of louc No	s No d noise or music on hearing
o the best of your k butside of class? four Name: eaching Speciality: fears of teaching exp school Name: ichool Address:	naviedge, did th Yesf	program to other teachers? Yes e students talk about the impact of louc No 	s No d noise or music on hearing
To the best of your k butside of class?	nowledge, did th Yes f Derience: Street City Country	program to other teachers? Yes e students talk about the impact of louc No 	s No d noise or music on hearing
o the best of your k putside of class? four Name: eaching Specialty: fears of teaching exp ichool Name: ichool Address:	nawledge, did th Yesf	program to other teachers? Yes e students talk about the impact of louc No 	s No d noise or music on hearing
o the best of your k outside of class? /our Name: eaching Specialty: /ears of teaching exp school Name: school Address: achool Address: we may call you for lassroom, please pr	nowledge, did th Yesf perience: Street City Country further informatic ovide us with a pl	program to other teachers? Yes e students talk about the impact of louc No State/Providence State/Providence	d noise or music on hearing
o the best of your k outside of class? 'our Name: eaching Specialty: 'ears of teaching exp ichool Name: ichool Address: we may call you for lassroom, please pr	nowledge, did th Yes	program to other teachers? Yes e students talk about the Impact of louc No 	d noise or music on hearing

House Ear Institute

 $\pm h$

A transformer of the second second