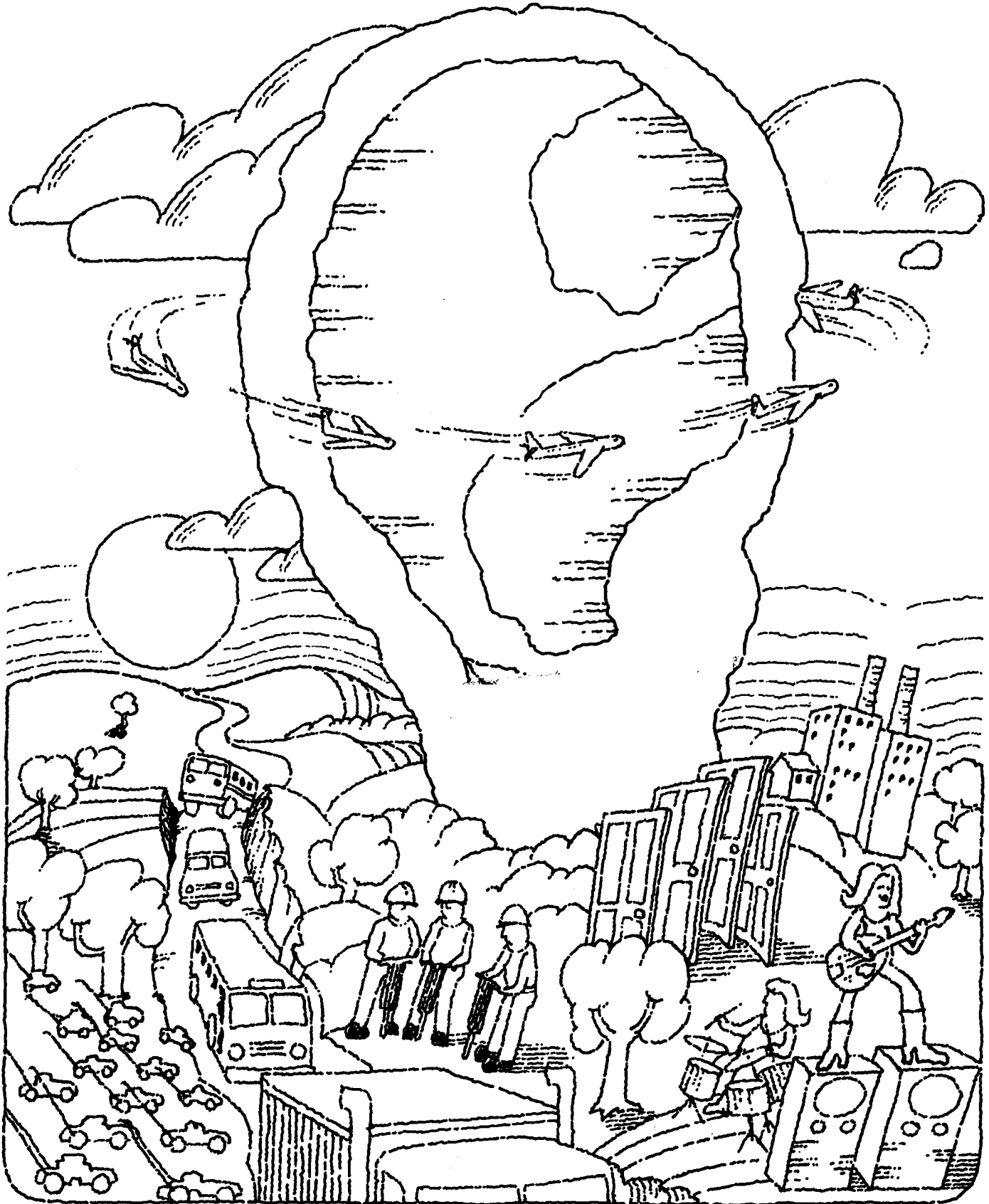


HEAR HERE!



Dear Parent:

We're concerned about environmental noise pollution and your child's hearing health. There are over 20 million Americans working, playing, and living around environmental noise that is dangerously loud.

Noise-induced hearing impairment is **permanent**. It is also hard to recognize, since it is painless and develops slowly. A person suffering from noise-induced hearing impairment often has difficulty understanding what others say, making communication difficult. With special training, a hearing aid may help some people communicate a little better, but it can't bring back what is already damaged or destroyed. Medicine or surgery will not cure noise-induced hearing impairment.

Hearing-impaired children may have problems learning in school. It may be hard for them to talk, play, and establish relationships with other children, which are essential for growth into healthy, stable adults.

Many things we find necessary or convenient or even enjoyable add to today's growing noise problems. These products include dishwashers, air conditioners, power tools, trucks, airplanes, hair dryers, construction, loud music, snowmobiles, motorcycles, and toys.

Congress has passed legislation that will require manufacturers to label equipment and toys that may harm your hearing. But this alone is not enough. **Everyone** can help. Make hearing protection and reducing noise a family affair. Ask your child what noises bother him or her at home. Tell your child what noises bother you. Discuss this brochure together. We think you'll learn much about your hearing and how to protect it.

Think quiet!

American Speech-Language and
Hearing Association

U.S. Environmental Protection Agency
Office of Noise Abatement
and Control

Whether you enjoy it or not . . .
... **TOO MUCH** noise can cause
PERMANENT hearing impairment!

The louder the sound is, and the longer
you listen to it, the more likely damage
will occur.

For example:

A rock musician who is around loud
music every night is likely to get a
hearing impairment from too much
loud music much sooner than a band
student who is around the same loud
music for only one hour during the day.

If...

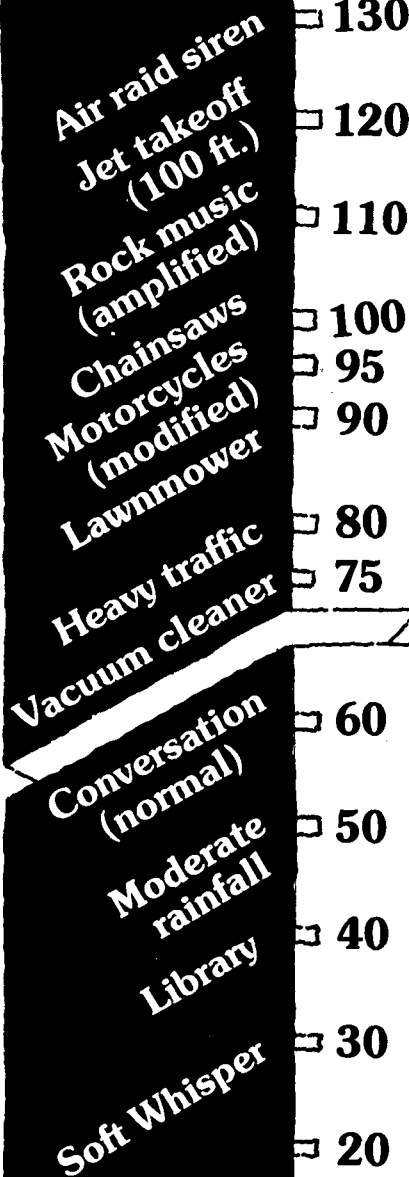
You have had difficulty hearing or
understanding what someone said

You have had ringing in your ears
after being in a noisy place

You have been unable to hear very
well after listening to loud music or
other sounds for a long time

Then...

You may have been exposed to a
loud sound that is hazardous to your
hearing health.



Decibels

Noise is measured in units called
decibels (**dB**). The greater the number
of decibels, the louder the noise. This
thermometer can give you an idea of
how loud some sounds are. Noise
levels (in decibels) indicated on the
thermometer are approximate as
measured at typical listener's distance. If
you're exposed to sounds above 70 dB
for a long time, they may harm your
hearing, sooner or later.



**HARMFUL
TO HEARIN**

Hearing conservation programs are
recommended for all employees in
workplaces where noise levels are
85dB or greater.

What happens inside the Ear when we hear sounds?

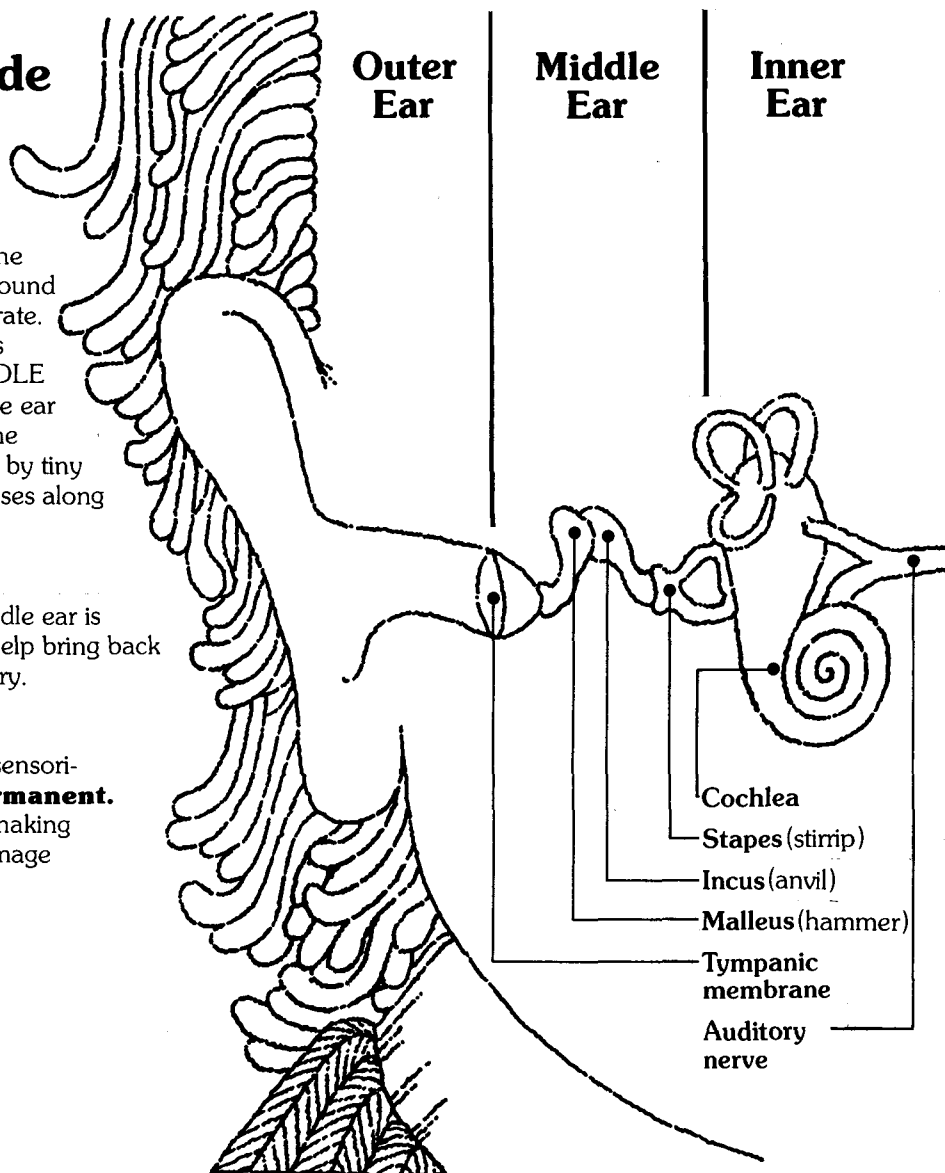
The OUTER EAR acts like a funnel to direct **sound waves** from the air to the **tympanic membrane** (eardrum). Sound causes the tympanic membrane to vibrate. These vibrations cause the three bones (malleus, incus, and stapes) in the MIDDLE EAR to move mechanically. The middle ear sends these mechanical vibrations to the INNER EAR where they are picked up by tiny **hair cells** and sent as electrical impulses along the **auditory nerve** to the **brain**.

Conductive Loss

A problem involving your outer or middle ear is conductive. Usually, your doctor can help bring back normal hearing with medicine or surgery.

Sensori-Neural Loss

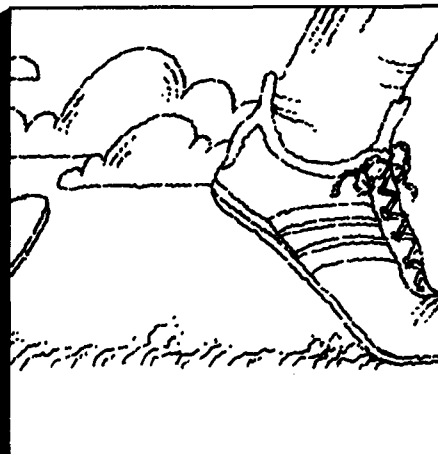
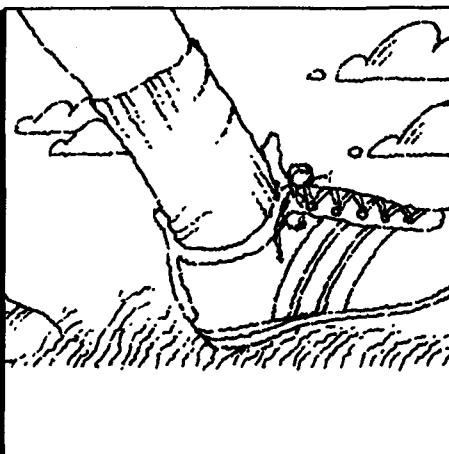
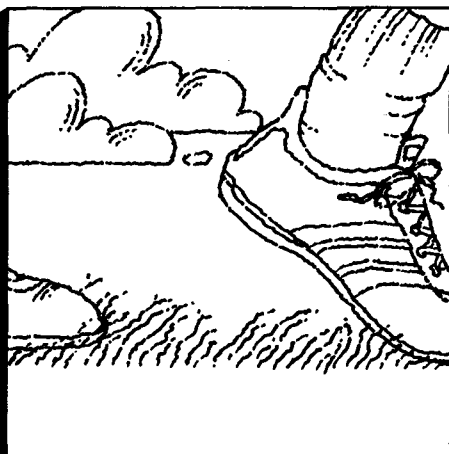
A problem involving your inner ear is sensori-neural. Damage to the inner ear is **permanent**. Sometimes a hearing aid will help by making sounds louder, but it cannot repair damage already done.



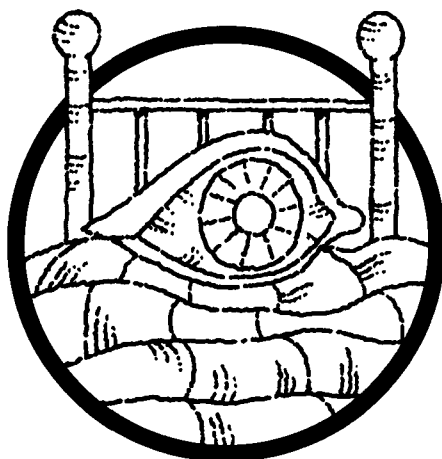
When you listen to sounds that are too loud for a long time they may damage the hair cells in the inner ear.

It's sort of like walking on grass over and over again. At first, the blades of grass just bend and then spring back. But...

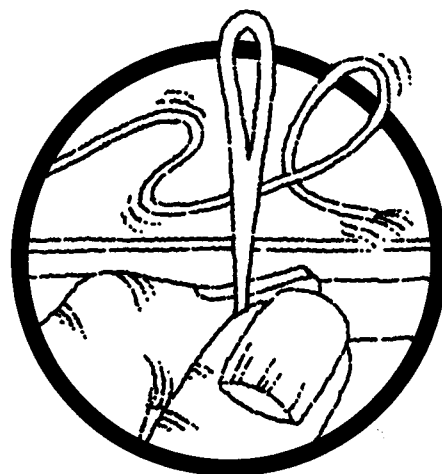
... if walked on constantly, the blades of grass no longer spring back. They turn yellow and die.



All noise doesn't have to be too loud. Some noise can just be **ANNOYING** enough to produce such bad effects as **STRESS**, **TENSION**, and **ANXIETY**.



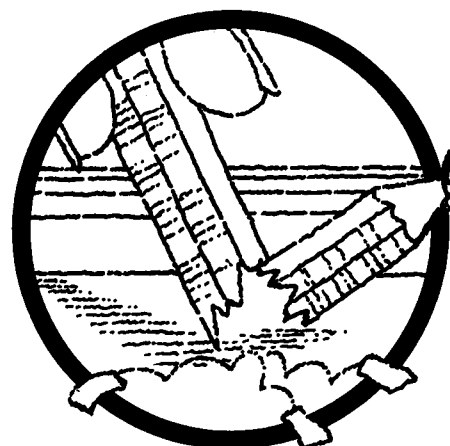
Such as when we have a restless sleep or can't sleep at all.



Such as when we can't concentrate on what we're doing.



Such as when we end up with a headache.



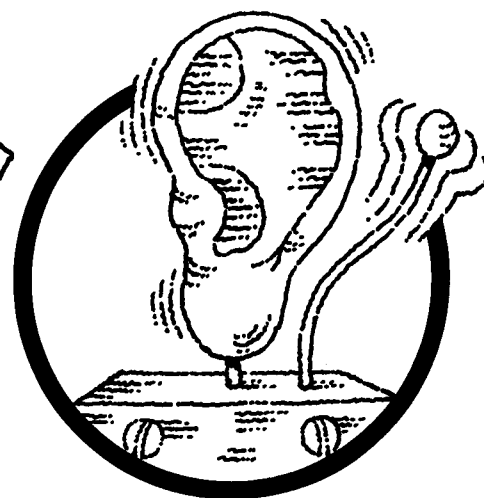
Such as when we become impatient and frustrated.

Of course many other things could cause these problems, but... the reason could be **NOISE!**

Sometimes our ears give us hints they've been overworked by too much sound...



Such as when we can't hear very well after exposure to loud sound.

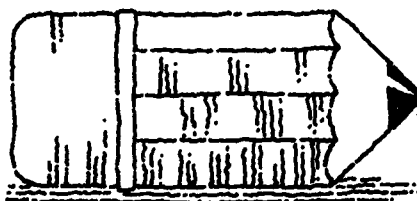


Such as when we have ringing in our ears after being around loud sound.

Who can help? Many people are interested in protecting your hearing.

The School Nurse

The school nurse may give you a hearing screening test to see if you need a complete hearing test.



PASS

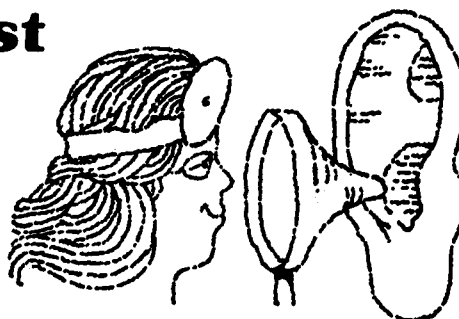


FAIL



The Otolaryngologist

The otolaryngologist is a medical doctor who may look in your ear, nose and throat, and give you medicine or recommend surgery for your hearing impairment. The otolaryngologist may send you to an audiologist for a complete hearing evaluation or rehabilitation (special training).



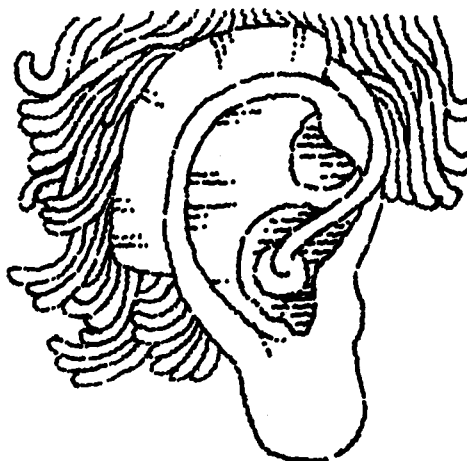
The Audiologist

The audiologist, a certified or licensed professional, may give you a complete hearing evaluation to measure your hearing abilities. If you have a hearing impairment, the audiologist will tell you how bad it is, what type it is, and what can be done to help you get along despite a hearing impairment. If you need it, the audiologist may recommend a hearing aid and help you select one.



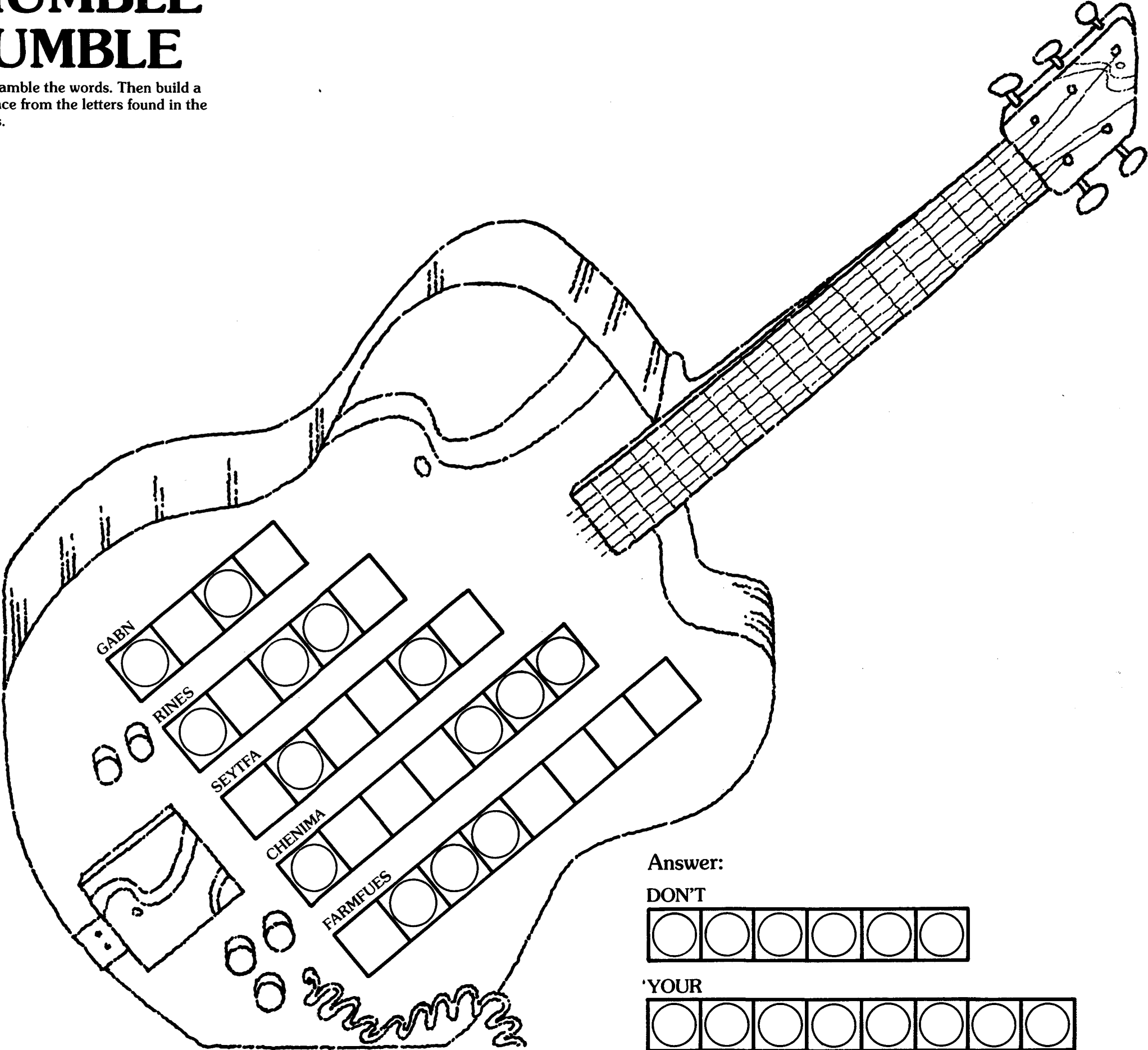
The Hearing Aid Dealer

After you have seen the otolaryngologist and the audiologist, the hearing aid dealer may sell you a hearing aid.



MUMBLE JUMBLE

Unscramble the words. Then build a sentence from the letters found in the circles.



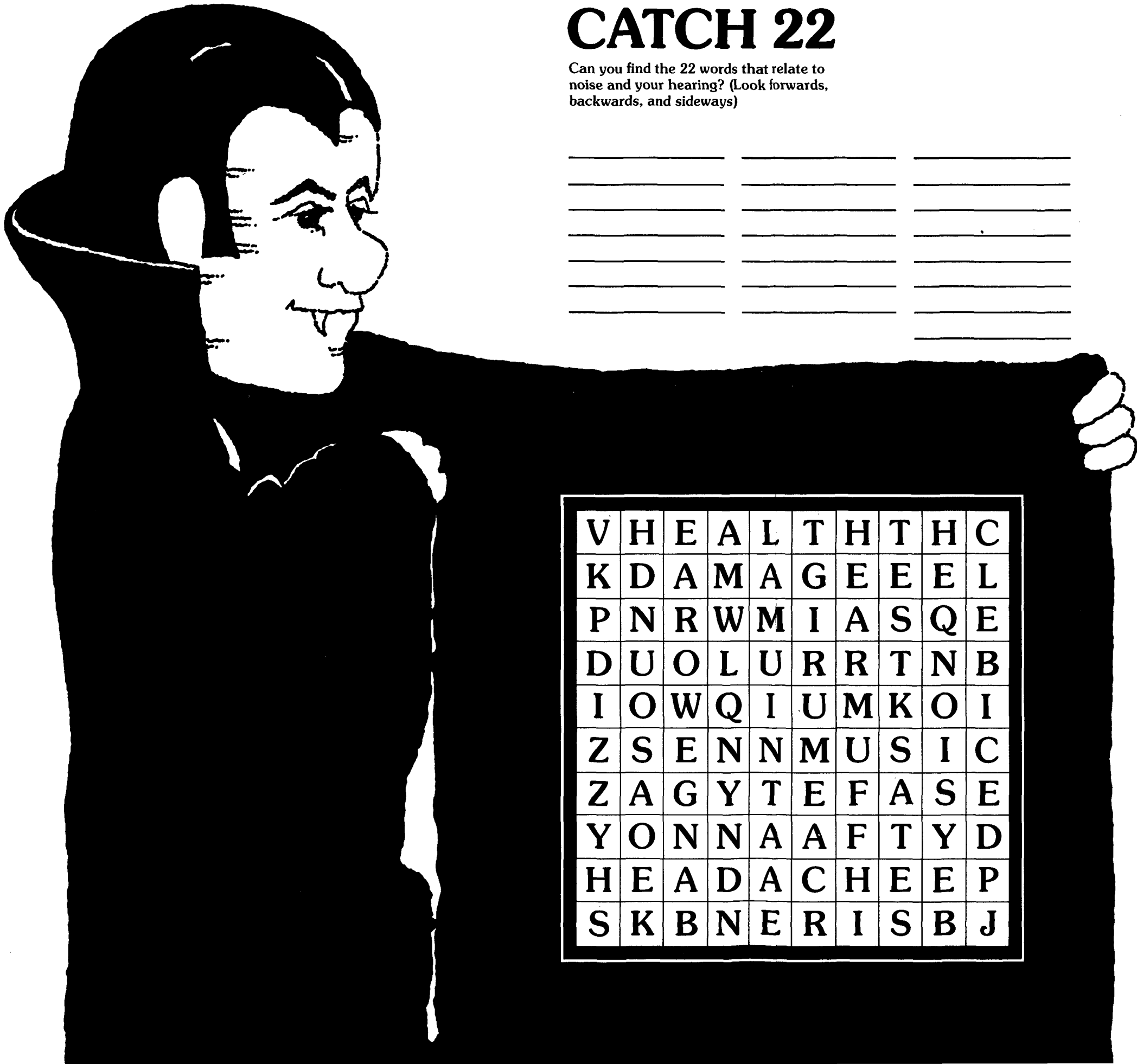
Answer:

DON'T

--	--	--	--	--	--

YOUR

--	--	--	--	--	--	--	--



CATCH 22

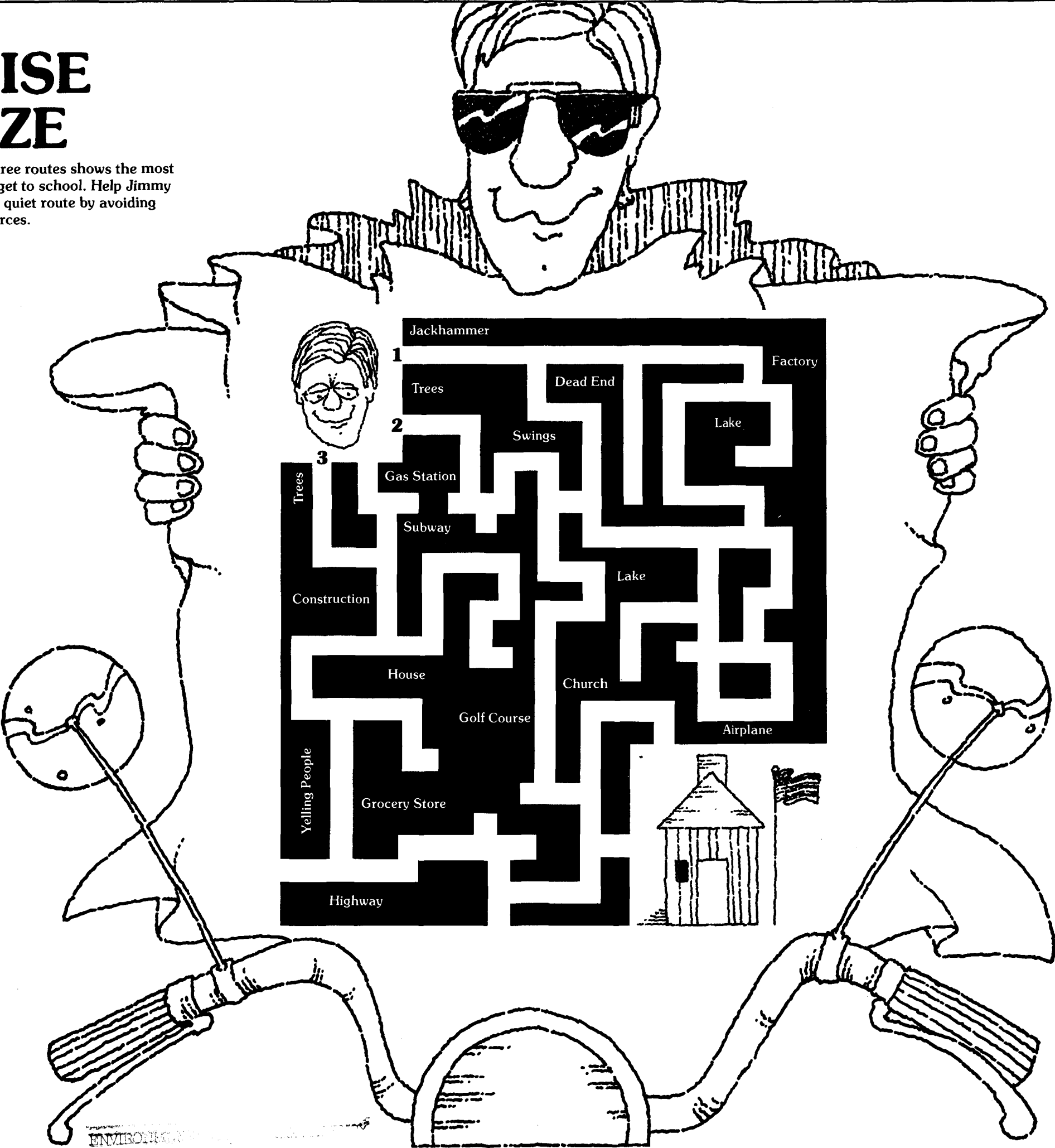
Can you find the 22 words that relate to noise and your hearing? (Look forwards, backwards, and sideways)

_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

V	H	E	A	L	T	H	T	H	C
K	D	A	M	A	G	E	E	E	L
P	N	R	W	M	I	A	S	Q	E
D	U	O	L	U	R	R	T	N	B
I	O	W	Q	I	U	M	K	O	I
Z	S	E	N	N	M	U	S	I	C
Z	A	G	Y	T	E	F	A	S	E
Y	O	N	N	A	A	F	T	Y	D
H	E	A	D	A	C	H	E	E	P
S	K	B	N	E	R	I	S	B	J

NOISE MAZE

One of the three routes shows the most quiet way to get to school. Help Jimmy find the most quiet route by avoiding the noise sources.



YOU can help too!

Remember . . . just because you have ears doesn't mean you can hear!

Like the air we breathe, your hearing is a good thing to have around!

- PROTECT** your hearing.
- Turn down the radio and TV.
 - Don't listen to loud music too long.
 - Wear ear protectors, (earmuffs and earplugs) when working or playing around loud noise.
 - Complain when something is too loud.
 - Have your hearing checked.
 - Look for EPA noise labels, which will be on consumer products soon.
 - Become aware of local noise ordinances.
 - Teach others about noise. Many people don't know how bad noise is for them.
 - List other things you can do:

For further information about noise and your hearing:



American Speech-Language and Hearing Association
10801 Rockville Pike
Rockville, Maryland 20852



U.S. Environmental Protection Agency
Office of Noise Abatement and Control
Washington, D.C. 20460

Answers:

**MUMBLE
JUMBLE**

YOUR

MMEBRAIN

DONT

SARTIAN

Bang, siren, safety, machine, earmuffs

**NOISE
MAZE**

Route 2 is the quietest route.

Environmental Noise Abatement
Program
1000 East Madison Street
Chicago, Illinois 60604

CATCH 22

V	H	E	A	L	T	H	T	H	C	
K	D	A	M	A	G	E	E	L		
P	N	R	W	M	I	A	S	Q	E	
D	U	O	L	U	R	R	T	N	B	
I	O	W	Q	I	U	M	K	O	I	
Z	S	E	N	N	M	U	S	I	C	
Z	A	G	Y	T	E	F	A	S	E	
Y	O	N	N	A	V	A	F	T	Y	D
H	E	A	D	A	C	H	E	E	P	
S	K	B	N	E	R	I	S	B	J	

health, damage,
ear, test, quiet,
nurse, earmuff,
hearing, sound,
dizzy, annoy,
headache, siren,
jet, decibel,
loud, bang,
rang, safety,
music, loud,
hear.