# AN EVALUATION OF HEARING TEST PROGRAM BROCHURES AND SOUNDS ALIVE

Two Elements of the Quiet School Program

Submitted by:

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Two Elements of the Quiet School Program

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#### **OUIET SCHOOL PROGRAM**

In the United States, there are approximately 60 million youth between the ages of 4 and 21. Recent research indicates an alarming increase in hearing impairment among these school-age citizens. Most noise-induced hearing impairment leads to the misunderstanding of verbal communication. This handicap can have social, psychological, and emotional implications. Equally important are the learning difficulties resulting from hearing loss and excessive noise.

Federal, State, and community noise laws and ordinances exist as a means to help reduce excessive noise. However, the success of prevention ultimately depends on public action resulting from awareness and education programs. Prevention efforts are important for children who have not yet been or are just beginning to be exposed to excessively high levels of environmental noise. In spite of this, it has been found that few school systems have approved noise education curricula. Textbooks address other forms of pollution, but courses of environmental study often include little information on excessive noise.

In an effort to reach the decisionmakers of tomorrow, the U.S. Environmental Protection Agency, Office of Noise Abatement and Control (EPA-ONAC) has developed a Quiet School Program. School programs and school-based programs in public and nonpublic schools are one of the most important features of a comprehensive noise public education program. In many communities throughout the United States, schools represent the single most important focal point for community activities and community life. Other reasons for school-based programs include the following:

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 Through the school community, large numbers of children can be reached. This can lead to a modification of noisy behavior and the development of a "quiet ethic" for teens and preteens.

- Teachers and school administrators place a high value on quiet. One cannot teach or learn in a noisy environment. This makes teachers and school administrators sensitive and also receptive to a Quiet School Program.
- Teachers' organizations are very influential community organizations and can be provided with information necessary for them to make informed judgments relative to noise and its control through education.
- Parents become involved since children take home most of the materials they receive in school; therefore, the potential for parental interest and motivation is created--especially if it is considered to be in the best interests of their children.
- Parent-Teacher Associations (PTA's) reflect the views and interests of parents and teachers as they relate to the local school system. The PTA often will want to assist in creating a quieter, more educational environment for the students.

The Quiet School Program is designed as an umbrella under which various aspects of noise in the school can be addressed. The basic elements of this program are:

- The Hearing Test Program
- Elementary Student Noise Workbook and Teacher's Guide
- Secondary Noise Workbook for Teachers The Quiet Driver Program/Student Motor Vehicle Noise Check
- Facility Noise Evaluation
- Teacher Orientation

An educational program can only remain relevant through frequent evaluation and, if needed, modification. Realizing this, EPA-ONAC has begun the evaluation process. This report, based on information collected during the 1979-1980 school year, summarizes the findings related to the first two elements of the Quiet School Program--the Hearing Test Program and Sounds Alive.

#### HEARING TEST PROGRAM BROCHURES

#### INTRODUCTION

The Hearing Test Program is an integral part of the EPA-ONAC's Quiet School Program. The Hearing Test Program coordinates the distribution of three student brochures (depending upon student grade level) with a hearing screening test.

Most States have laws that require hearing screening tests. The tests are administered to students to determine their level of hearing or possible loss of hearing.

Social surveys indicate that generally children and their parents are not adequately informed about the importance of these tests. Since it was felt that there was a great need to educate children about the harmful effects of too much noise and what can be done to protect their hearing, EPA, in collaboration with the American Speech, Language, and Hearing Association (ASLHA), developed three student brochures designed for specific age groups. The brochures are:

- "Noise and Your Hearing" (Kindergarten through 3rd Grade)
- "Hear Here" (Grades 4 through 6)
- "Think Quietly About Noise" (Grade 7 and Up).

Since many students do not know or cannot appreciate the importance of hearing tests, the brochures were developed to be distributed immediately before or immediately after the tests. They provide information on noise and its effects on hearing and learning. The brochures also provide the students' parents with a message about the harmful effects of excessive noise and offer suggestions on how they can help protect their children's hearing.

#### DATA COLLECTION

Three school districts were identified to assist EPA-ONAC in evaluating the <u>Hearing Test Program</u> brochures. The pilot school districts were:

Des Moines, Iowa; Phoenix, Arizona; and Baltimore, Maryland. Additionally, the parents of children attending public schools in three Maryland counties were polled. These counties were: Montgomery, Anne Arundel, and Baltimore Counties.

The three brochures were sent to a noise program coordinator in each of the three school districts. The noise coordinator met with teachers and explained the <u>Hearing Test Program</u>. The teachers were given the brochures and asked to supply the noise program coordinator with data on the appropriateness and effectiveness of the brochures.

Because of the teachers' hectic schedules, the data supplied by the participating teachers consisted primarily of verbal communication with the noise program coordinators. The coordinators, in turn, supplied EPA-ONAC with a summary of the teachers' responses. In an effort to obtain additional information and to better assess teacher, student, and parent responses to the brochures, EPA-ONAC conducted telephone interviews with each coordinator.

In the initial development of the three hearing test brochures, ASHLHA conducted the Maryland study to determine the effectiveness of the brochures. The evaluation included students and teachers, in addition to the parents, and ASHLHA continues to support the use of the <u>Hearing Test Program</u> brochures.

#### DATA ANALYSIS

Response to the written evaluation form, <u>Teacher's Comments on Hearing</u>
<u>Test Program</u> (Appendix A, Form A), was less than anticipated. The data
were incomplete and not suitable for detailed analysis. Generally, speaking,
though, the teachers considered the brochures grade-level appropriate and

felt they were educational and interesting to the students. <u>Teacher response</u> on the comment sheet indicated a need for more information on noise.

The noise coordinators in the pilot districts completed a general evaluation form on the <u>Hearing Test Program</u> brochures (Appendix A, Form B). More than 4,000 brochures were distributed in the piloting effort. Coordinator response indicated that they were distributed to a varied audience and were well received. In addition to students, brochure recipients included:

- teachers
- school system administrators
- school nurses
- speech therapists and pathologists
- · audiologists, and
- patients in waiting areas of Health Department Ear, Nose and Throat Clinics.

In an effort to receive more specific information, EPA-ONAC conducted a telephone conversation with each noise program coordinator (Appendix A, Form C).

The coordinators indicated that, in most cases, the brochures were given to the students immediately after the hearing test. In a few instances, the students were given the brochures while they waited to be given their hearing tests. The point in time at which the brochures were distributed appears not to have influenced the student interest in the materials. The brochures were developed to have the greatest impact when distributed at the time of hearing tests. The brochures help explain the importance of the hearing tests, how to protect hearing, and help reduce the anxiety children feel about testing. Hopefully, the teacher will persue "noise" in classroom study.

The noise program coordinator in Baltimore discussed a novel approach. Two pilot schools were identified—both were high schools. Each of the brochures was distributed to participating students. The coordinator indicated that Noise and Your Hearing, designed for use with primary and lower elementary school students, was distributed to low-level 10th graders (many of them with severe learning disabilities). According to the coordinator, those students reacted very favorably to the brochures. The coordinator also stated that the response of other students to Hear Here! and Think Quietly About Noise was excellent. As a result, community feedback was positive. Teachers in nonparticipating schools have requested the brochures to be used as part of a curriculum unit on noise.

Data from the ASHLA study included a parent questionnaire (Appendix B, Table 1). The data support the observations of the teacher and noise program coordinator (i.e., the brochures were effective in introducing noise as a concern). All of the responding parents agreed that the information was appropriate. Only one responding parent felt that the graphics were inappropriate for the age of his/her child. (No further data are available on this comment.)

The activities in the brochures were rated by the parents as being both interesting and age-level appropriate (95 percent and 89 percent, respectively). Age-level appropriateness is further supported by the fact that only 31 percent of the parents believed their children needed assistance with the activities.

An interesting value associated with the brochures is parent education. Eighty-two percent of the parents felt that the brochures increased their own awareness about the hazardous effects of noise on hearing. This should not be surprising, since 89 percent of the parents questioned said they either discussed the brochure with or read it to their child.

High parental interest might be associated with parents' perception of child interest in the brochures. Ninety percent of the parents thought that their child had been interested in the brochure.

Appendix C (see C-5) provides a partial listing of individual teacher requests for the hearing test brochures. The map on C-8 shows request distribution and reflects teacher interest nationally for noise materials.

#### PERCEIVED NEEDS

The teachers and noise program coordinators feel that, although the educational process could develop a quiet ethic in children, most public school curricula need more noise-related materials. The addition of trained acoustical or health personnel would help enhance the subject of noise and the presentation of the brochures.

The pilot project in Baltimore resulted in requests to the Health Department for both materials and resource people. The industrial engineer was called upon to give presentations on noise and noise measurement to school classes. Such expertise may not be available to some school systems, but other resources should be available: EPA regions, noise counselors, ASLHA, etc. Inservice training for teachers might assist in the development of both viable local school noise education programs and a cadre of trained personnel to call upon.

The coordinators stated that more materials related to noise and hearing are needed. Specifically mentioned was the need for a film. One of the coordinators stated that she knew of one film that was commercially available. However, her district did not have the funds available to purchase the film. She suggested that EPA commission the production of a film to augment the Hearing Test Program materials.

#### SOUNDS ALIVE

#### INTRODUCTION

Teachers often have latitude with respect to lesson planning within their approved curricula. Therefore, curriculum modules have been developed that serve to increase noise awareness in students and educate those students about noise and its health effects. The modules are also designed to show students that they can help reduce noise at school, home, and elsewhere. <u>Sounds Alive</u> is one of the cirriculum modules.

Sounds Alive is an elementary school noise curriculum for students in kindergarten through fourth grade. The module includes a teacher's guide and a workbook for students. The students learn about noise and its effects on people through noise activities, games, and other accepted teaching techniques. The teacher's guide for the module contains background information on noise and its effects, lesson plans, and suggested films and other resources.

#### DATA COLLECTION

Three pilot cities were identified to participate in the evaluation of the <u>Sounds Alive</u> curriculum module. The cities were: Des Moines, Iowa; Fayetteville, North Carolina; and Salt Lake City, Utah. The materials were distributed to the schools by a local noise program coordinator. The participating teachers were asked to complete a brief evaluation form (Appendix A, Form D). They were requested to return the form to EPA-ONAC through their local noise program coordinator. The response rate was approximately 22 percent. Five unsolicited responses were received from teachers who obtained <u>Sounds Alive</u> either at professional meetings or by request from EPA-ONAC.

It was hoped that teacher response to the questionnaire would be greater. It is felt that two factors contributed to the low response rate. First, EPA-ONAC was dependent upon nonstaff personnel for data collection. These people were busy professionals with many duties within their community. Unfortunately, they did not have the time or additional staff necessary to conduct followup contacts with the teachers. Second, the questionnaires were collected early in the second semester of the school year. It is possible that some teachers had not used <u>Sounds Alive</u> at the time the survey was conducted.

Three other communities were involved in mini-pilots of this material. They were: San Diego, California; Albuquerque, New Mexico; and Norman, Oklahoma. Responses were also received from: Daly City and El Monte, California; St. Petersburg, Florida; and Jonesboro, Georgia.

#### DATA ANALYSIS

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The teachers were requested to make "Yes" or "No" responses to six questions dealing with <u>Sounds Alive</u> (Appendix B, Table 2). The responding teachers unanimously agreed that the curriculum module was both useful and interesting to their students. In the past, many teachers expressed a need for curricular materials on noise and its health effects; the teachers who responded to the questionnaire indicated that <u>Sounds Alive</u> helps fill that curricular void.

The teachers overwhelmingly agreed (95 percent) that <u>Sounds Alive</u> was appropriate for the grade level they taught. This curriculum module is designed for use with kindergarten through fourth grade students. As expected, most teachers (62 percent) needed to adapt the material to correspond with their students' abilities. Many of the teachers indicated that the vocabulary in <u>Sounds Alive</u> is advanced. The Fry Readability Scale supports the teachers' findings. Three 100 word passages were selected at random from <u>Sounds Alive</u> and tested for readability. Seventh grade was the

average readability level (Fry Readability Scale). Even though the vocabulary level is high, some teachers indicated that their students enjoyed "working with hard words."

Teacher acceptance of <u>Sounds Alive</u> is further demonstrated by their willingness to interest other teachers in the curriculum. Approximately 80 percent of the teachers responding to the questionnaire indicated that they had shared their enthusiasm for <u>Sounds Alive</u> with their peers.

One interesting value of the curriculum is the effect it has on developing other noise-related activities in addition to those provided. Teachers indicated that <u>Sounds Alive</u> provided an impetus to develop additional language arts, social studies, health, mathematics, and science activities in the area of noise.

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#### SOME WRITTEN COMMENTS

Many teachers took the time to add written comments in the spaces provided on the questionnaire. A sample of the comments follow.

- "I hope this program will become a part of the curriculum.... The students were quite surprised how much some noise is really unnecessary."
- "...include [the] school nurse and pathologist."
- "I would like another module."
- "Perhaps with some classes it would be necessary to help them with some of the vocabulary - I have taught several classes in the past in junior high who would have trouble [with some of the words]."
- "...include a section in the back on extension activities..." [Respondent goes on to describe an activity that might be included].
- "We have learned a great deal of information...."
- "...easily correlated with Health and Social Studies...."

- "I don't know if your budget will allow you to continue to supply these free of charge. Cost could be cut by providing masters to run off the consumable portions of the book."
- "The noise module is very good as is. Please check Crossword Puzzle on (p. 25) A and 3." (An error did exist. This was the only teacher to identify the error. The error has since been corrected.)
- "Since we were able to <u>use</u> a sound level meter, the unit was particularly useful."
- "...there has been a tremendous response from teachers using the workbooks."
- "I modified the material by using parts that applied to what we were doing in science."
- "We had students bring pictures of noise sources and made a bulletin board in the main hallway for the whole school. It really affected the students' behavior as far as their 'noise' level."

This last teacher comment calls for some amplification. It is extremely difficult, if not impossible, to measure an actual reduction in decibel levels as a result of student participation in <u>Sounds Alive</u>. Learning theorists and behaviorists state that an increase in information frequently results in behavioral change. The results of observations in an elementary school in Des Moines, Iowa, tend to support the above.

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The local noise program coordinator gave a number of presentations to second and third grade classes that were using <u>Sounds Alive</u>. A study was then conducted in the lunchroom. The coordinator found that when the fifth and sixth graders (nonusers of <u>Sounds Alive</u>) ate, noise levels of 72 dB or more were common. During the lunch period for second and third graders, noise levels usually remained near 68 dB. The coordinator concedes that the noise level has risen slightly. However, it continues to remain below that of the older students.

Finally, the same noise coordinator states that an antinoise campaign in a second elementary school appears to have reduced schoolwide noise. Participating

students give short presentations on noise to other classes. While no attempt has been made to quantify data, visitors to the school have remarked about the reduction of noise levels in the hallways.

#### SUMMARY AND CONCLUSIONS

This report is based on information collected by EPA-ONAC, ASLHA and noise program coordinators. The information indicates that the <u>Hearing</u>

<u>Test Program</u> brochures and the <u>Sounds Alive</u> curriculum module have been well received by those people who have used the materials. EPA-ONAC continues to receive a large number of requests for information and materials associated with the above programs (see Appendix C).

The respondents to the questionnaires believe that the brochures and the curriculum module are viable programs. Observations indicate that students participating in either program appear to become more aware of excessive noise. Therefore, the materials can aid in developing a "quiet ethic" in tomorrow's citizens.

The <u>Hearing Test Program</u> brochures are designed to be shared with the childrens' parents. Since parents often learn things from their children, this program can increase parental knowledge about the impact of excessive noise, thus having a great multiplier effect.

Sounds Alive was designed for use in kindergarten through fourth grade. However, the module was used with students through sixth grade. The teachers and students expressed interest in the curriculum. Some teachers indicated that the vocabulary was too advanced for their students. If a revised edition is planned, it is recommended that the readability level be adjusted to grade level. A supplementary vocabulary list currently being developed should be helpful to teachers and students using this module.

The teachers and noise program coordinators indicated a need for additional materials. Obviously, fiscal constraints influence EPA-ONAC's ability to respond to that need. Alternative ways to develop and reproduce

educational materials, including audiovisual aids, are being explored. A cooperative effort between EPA-ONAC and other Federal Agencies (e.g., Department of Education) or civic/fraternal organizations will assist in strengthening the program and providing additional resources.

It is important that noise education materials for both youth and adults be relevant to the world in which they live. Only through continued evaluation and revision of current materials and development of additional noise materials can this goal be accomplished.

APPENDIXES

APPENDIX A SURVEY FORMS

Name:	Address:
Grade Level:	
School:	
	Number of bro
NOISE AND YOUR HEARING (K to 4)	
HEAR HERE! (5 to 8)	
THINK QUIETLY ABOUT NOISE (9 and up)	
Did you	YES
Consider brochure appropriate for your grade level?	
Find that students better unders reasons for hearing tests?	tood
Feel that brochure held your students' interest?	
* Initiate other noise projects because of this interest?	
Receive any reactions from parent because of these brochures?	:s
Use brochures without hearing tes (already given, received too late, etc.)?	its
Feel more noise information is needed?	
If yes, please list additional classroom	noise activities:
<del></del>	
any other comments:	

#### Form B

# EVALUATION HEARING TEST PROGRAM BROCHURES

To be completed by the Hearing Test Program Coordinator for the school system and sent to the EPA Noise Office.

Please complete the following information:

Brochure	Number given	No. of schools giving hearing test
NOISE AND YOUR HEARING		
HEAR HERE!		
THINK QUIETLY ABOUT NOISE		
Did any other groups receive the brochur	res?	
Please list groups, brochure, and number	given:	
Do you feel that the brochures were effe	ctive?	
Did any of the schools conduct a classro amount of interest in the subject of nois	e?	
Have any of the schools and/or classroom received brochures?	• •	
Has the school system and/or schools recentation on noise?	• .	
Please give a brief summary of the brochu	ures' impact in your	school district.

We appreciate your help and coordination in the hearing test program. Please mail to:

EPA Noise Office ANR-471 Washington, DC 20460 1 3

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# Telephone Survey Hearing Test Brochures

We appreciate your help.

- When was the hearing test conducted?
- 2. In how many schools?
- 3. How many of the schools received hearing test brochures?
- 4. Approximately how many students were tested? Preliminary screening? Follow-up screening?
- 5. Are hearing tests mandated by State Law?
- 6. Who sponsors the hearing tests? School system? Health department? Health clinics? Other?
- 7. How many times will a student be tested during school years?
  At what intervals?

Elementary - grades:
Secondary - grades:
Both:

8. Do you know what kind of information was given to students before the hearing tests?

Teacher discussions in classrooms?

Nurses, audiologists or other health personnel?

- Are parents notified in advance of hearing tests?
- 10. Who presented EPA's hearing test brochures?

Audiologist \_\_\_\_ Teacher \_\_\_\_ Other

- 11. Did you present a briefing for participating teachers before they disseminated the materials?
- 12. Were the brochures given out to students before or after the hearing tests?

  Before
  After
- 13. What was the reaction of the students to the materials?
  - 1. no reaction
  - 2. enthused
  - 3. wanted more materials
  - discussed information later

14.	Was any kind of publicity received on the hearing test program?  Through:  Radio  Newspaper articles  School flyers
15.	Do you know if the brochures were taken home to parents?
16.	Did you receive any feedback from parents/teachers? If so, what kind?
17.	Regarding the hearing tests, would you say that hearing loss in students was  More than expected  Same as last year Less than expected
18.	What percentage of those tested were recommended for a second screening?
19.	Do you think we can instill a "Ouiet Ethic" in children through the

## Future use of brochures:

educational process?

- Would you suggest that a brief discussion on hearing protection be conducted by the teacher, nurse, audiologist prior to or immediately after the test? What additional materials do you suggest?
- 2. Do you feel there is value in sensitizing the parents in regard to excessive noise and its effect on health? How can we best reach parents?

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- 3. Do you have any suggestions on how the hearing test program, as it relates to noise, can be improved?
- 4. Are you interested in knowing more about the Quiet School Program?

Form D

## TEACHER'S COMMENTS ON SOUNDS ALIVE

Name:	· <u>·</u> ··································	Address	s:		
Grade Level:	· · · · · · · · · · · · · · · · · · ·				
School:					
Did you		F	YES	, NO	7
	material appropriate our grade level?				
find it materi	necessary to adapt the al to your grade level?				
find the	material useful?				
	t material held tudents' interest?				
	other noise projects e of this interest?				
	er teachers within the interested in the module?				
think should be don	e noise module should be mod e to improve it. (We would rkbook with your comments ar	apprecia	te it i	f you c	ould mark
Any other comments:					
					Thank you.
Please mail to:	State and Local Programs EPA Noise Office, ANR-471 Washington, DC 20460		•		

APPENDIX B
TABLES

TABLE 1.

# Parent Questionnaire Results\*

1.	The information in the brochure was:	Beneficial	- 43	Not beneficial	· -	0
	brochure was:	Informative	- 55	Not informative	-	0
		Thorough	- 14	Not thorough	-	4
		Appropriate for age	- 37	Not appropriate for age	-	0
2.	For your child, the	Interesting	- 51	Not interesting	-	0
	graphics were:	Realistic	- 24	Not realistic	-	2
		Appropriate for age	- 33	Not appropriate for age	-	1
		Attractive	- 21	Not attractive	-	0
3.	The activities (drawing, coloring, games) for	Interesting	- 38	Not interesting	-	2
	children were:	Appropriate for age	- 33	Not appropriate for age	-	4
4.	Did your child need help with the activities?	Yes	- 20	No	- 4	5
5.	The size of the brochure was:	Appropriate	- 55	Not appropriate	-	1
	W02:			Too large	- 1	0
				Too small	-	2
6.	Did the brochure increase your awareness of the hazardous effects of noise on your hearing?	Yes	- 56	No	- 1	2
7.	Did you discuss the bro- chure with your child (or read it to him/her)?	Yes	- 60	No	-	7
8.	Did your child seem interested in the brochure?	Yes	- 57	No	-	6

<sup>\*</sup> As developed by the American Speech, Language, and Hearing Association.

9.	What did you like best about the brochure?	Subject matter	-	37				
		Graphics	-	15		•		
		Size	-	15				
		Appropriate- ness for age	_	9				
		Activities (coloring, games, drawings)		25				
10.	What did you like least about the brochure?	Subject matter	_	6				
		Graphics	-	10				
		Size	-	19				
		Appropriate- ness for age	_	5				
		Activities (coloring, games, drawings)	-	5				
11.	Has your child had a hearing test?	Yes	-	64	No		-	4
12.	Was your child's hearing within normal limits?	Yes	-	62	No		-	5
13.	If no, did you follow-up with a visit to a medi- cal doctor or Audiologist?	Yes	-	5	Мо		-	4
14.	Do you already take pre- cautions to protect your child's hearing?	Yes	-	56	No		-	7

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## Summary of Teacher Response to Sounds Alive Questionnaire

Did you:
consider material appropriate for your grade level?
find it necessary to adapt the material to your grade level?
find the material useful?
<pre>feel that material held   your students' interest?</pre>
<pre>initiate other noise projects because of this interest?</pre>
find other teachers within the school
interested in the module?

YES	NO	NO RESPONSE
95%	5%	
33%	62%	5%
100%		
100%	,	
100%		· · · · · · · · · · · · · · · · · · ·
0.00	a o	100
86%	4%	10%
010		100
81%	<del></del>	19%

APPENDIX C

REQUESTS FOR INFORMATION

## PARTIAL LISTING OF TEACHER REQUESTS FOR SOUNDS ALIVE

REGION I
Bridgeport, Connecticut
Bucksport, Maine (2)
Pittsfield, Maine
Boston, Massachusetts
Gloucester, Massachusetts
Marblehead, Massachusetts
New Bedford, Massachusetts
Burlington, Vermont
Montpelier, Vermont

REGION II Cherry Hill, New Jersey Flanders, New Jersey Jersey City, New Jersey (2) Little Falls, New Jersey (2) North Bergen, New Jersey Oakland, New Jersey Palisades Park, New Jersey Ridgewood, New Jersey River Edge, New Jersey Short Hills, New Jersey Somerville, New Jersey Teaneck, New Jersey (2) Wayne, New Jersey West Paterson, New Jersey Cincinnatus, New York Franklin Square, New York Grand Island, New York Levittown, New York North Syracuse, New York APO New York (Germany) (3) Caquas, Puerto Rico Guanica, Puerto Rico Quebradillas, Puerto Rico Rio Piedras, Puerto Rico Veja Baja, Puerto Rico

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REGION III
Washington, D.C. (6)
Baltimore, Maryland (2)
Bel Air, Maryland
Frederick, Maryland
Hagerstown, Maryland (3)
Lanham, Maryland
Lexington Park, Maryland
Edinboro, Pennsylvania
Erie, Pennsylvania
Fredericksburg, Pennsylvania

Hegins, Pennsylvania
New Cumberland, Pennsylvania
Philadelphia, Pennsylvania
Richboro, Pennsylvania
Slatington, Pennsylvania
Willow Street, Pennsylvania
Arlington, Virginia (3)
Springfield, Virginia
Charleston, West Virginia
Keyser, West Virginia
Logan, West Virginia
Omar, West Virginia
Parkersburg, West Virginia

REGION IV Athens, Alabama Auburn, Alabama Birmingham, Alabama (4) Cullman, Alabama Gardendale, Alabama Lester, Alabama Boca Raton, Florida (2) Jacksonville, Florida Miami, Florida (2) Port Orange, Florida (2) St. Petersburg, Florida (2) Tallahassee, Florida West Palm Beach, Florida Atlanta, Georgia (3) Jonesboro, Georgia Louisville, Kentucky (4) Monticello, Kentucky Brandon, Mississippi (2) McComb, Mississippi New Albany, Mississippi (2) Charlotte, North Carolina Chapel Hill, North Carolina Durham, North Carolina Fayetteville, North Carolina Goldsboro, North Carolina Anderson, South Carolina (3) Winnsboro, South Carolina Chattanooga, Tennessee (2) Collierville, Tennessee Franklin, Tennessee Morristown, Tennessee Nashville, Tennessee Tullahoma, Tennessee

REGION V Arlington Heights, Illinois (2) Bellwood, Illinois Berwyn, Illinois Calumet, Illinois (2) Calumet Park, Illinois Champaign, Illinois Chicago, Illinois Des Plaines, Illinois (3) Elk Grove, Illinois Evanston, Illinois (3) Forest Park, Illinois (2) Glen Ellyn, Illinois Glenview, Illinois (2) Harvey, Illinois (2) Hillside, Illinois Justice, Illinois (2) Moline, Illinois Mt. Prospect, Illinois Naperville, Illinois Niles, Illinois Northfield, Illinois Oak Brook, Illinois Park Forest, Illinois Park Forest South, Illinois Richton Park, Illinois (2) Rockford, Illinois (2) Rolling Meadows, Illinois Schaumberg, Illinois Skokie, Illinois (3) Walnut, Illinois Wheaton, Illinois Chestertown, Indiana Columbus, Indiana (2) Greenwood, Indiana (3) Hamilton, Indiana Hammond, Indiana (2) Merriville, Indiana Muncie, Indiana Terre Haute, Indiana (2) Brighton, Michigan Detroit, Michigan (3) East Lansing, Michigan Flint, Michigan Hartford, Michigan Livonia, Michigan Mt. Clemens, Michigan (2) Rochester, Michigan (2) Royal Oak, Michigan

St. Clair Shores, Michigan Selfridge A.N.G. Base, Michigan Sterling Heights, Illinois Warren, Michigan West Bloomfield, Michigan Ypsilanti, Michigan Lake Elmo, Minnesota Minneapolis, Minnesota (2) Proctor, Minnesota St. Paul, Minnesota (3) Stillwater, Minnesota Wabasso, Minnesota Ada, Ohio Barnesville, Ohio Campbell, Ohio Sylvania, Ohio Irma, Wisconsin Kimberly, Wisconsin La Crosse, Wisconsin Madison, Wisconsin Merrill, Wisconsin

REGION VI Broussard, Louisiana Lake Charles, Louisiana Albuquerque, New Mexico (3) Central, New Mexico Farmington, New Mexico Las Cruces, New Mexico Maxwell, New Mexico Roswell, New Mexico Ardmore, Oklahoma Lindsay, Oklahoma Norman, Oklahoma (3) Oklahoma City, Oklahoma Wayne, Oklahoma Austin, Texas (2) Brownsville, Texas Bryan, Texas Burkburnett, Texas Dallas, Texas El Paso, Texas Houston, Texas (3) Livingston, Texas Lubbock, Texas San Antonio, Texas Shepherd, Texas Southlake, Texas Waco, Texas

REGION VII
Boone, Iowa
Des Moines, Iowa (53)
Ottumwa, Iowa
Haysville, Kansas
Newton, Kansas
Topeka, Kansas
Wichita, Kansas (2)
Kansas City, Missouri
Parkville, Missouri (2)
Lincoln, Nebraska
Pierce, Nebraska

REGION VIII
Security, Colorado
Bismarck, North Dakota (3)
Sidney, North Dakota
Wahpeton, North Dakota
Sioux Falls, South Dakota (2)
Vermillion, South Dakota
Ogden, Utah
Salt Lake City, Utah (3)

REGION IX
Mesa, Arizona (2)
Phoenix, Arizona (4)
Alameda, California
Chatsworth, California
Daly City, California
El Monte, California
Glendale, California
Long Beach, California
Los Altos, California
Los Angeles, California
Quincy, California
Quincy, California
Reseda, California
Sacramento, California
San Diego, California
(2)
San Fernando, California
APO San Francisco (2)
San Rafael, California
Santa Cruz, California
South San Gabriel, California
Ventura, California
Kaneohe, Hawaii
Sparks, Nevada (2)

REGION X Anchorage, Alaska (2) Idaho Falls, Idaho Pocatello, Idaho (3) Dallas, Oregon (2) Aberdeen, Washington (2) Eastsound, Washington C-4

#### PARTIAL LISTING OF TEACHER REQUESTS FOR HEARING TEST BROCHURES

REGION I
Bridgeport, Connecticut
Bridgeport, Connecticut
Bridgeport, Connecticut
Bucksport, Maine
Boston, Massachusetts
Gloucester, Massachusetts
Gloucester, Massachusetts
Marblehead, Massachusetts
Marblehead, Massachusetts
Norton, Massachusetts
South Attleboro, Massachusetts
Bennington, Vermont
Burlington, Vermont

REGION II Cherry Hill, New Jersey Jersey City, New Jersey Little Falls, New Jersey Little Falls, New Jersey Little falls, New Jersey Little Falls, New Jersey Palisades Park, New Jersey River Edge, New Jersey Teaneck, New Jersey West Paterson, New Jersey West Paterson, New Jersey Franklin Square, New York Grand Island, New York Levittown, New York Lewistown, New York Oneonta, New York Wayne, New York APO New York Caquas, Puerto Rico

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REGION III
Washington, D.C.
Washington, D.C.
Washington, D.C.
Baltimore, Maryland
Bel Air, Maryland
Bel Air, Maryland
Hagerstown, Maryland
Hagerstown, Maryland
Hagerstown, Maryland
Hagerstown, Maryland
Hagerstown, Maryland
Hagerstown, Maryland
Lexington Park, Maryland
Pylesville, Maryland
Upper Marlboro, Maryland

Drexel Hill, Pennsylvania Erie, Pennsylvania New Cumberland, Pennsylvania Philadelphia, Pennsylvania Philadelphia, Pennsylvania Philadelphia, Pennsylvania Pittsburgh, Pennsylvania Richboro, Pennsylvania Willow Grove, Pennsylvania Willow Street, Pennsylvania Arlington, Virginia Arlington, Virginia Arlington, Virginia Springfield, Virginia Follansbee, West Virginia Huntington, West Virginia Keyser, West Virginia Logan, West Virginia Man, West Virginia Omar, West Virginia Parkersburg, West Virginia

REGION IV Athens, Alabama Athens, Alabama Auburn, Alabama Birmingham, Alabama Gardendale, Alabama Boca Raton, Florida Fort Orange, Florida Fort Orange, Florida Longwood, Florida Miami, Florida St. Petersburg, Florida St. Petersburg, Florida Atlanta, Georgia Atlanta, Georgia Atlanta, Georgia Atlanta, Georgia Richmond Hill, Georgia Louisville, Kentucky Louisville, Kentucky Brandon, Mississippi Jackson, Mississippi McComb, Mississippi New Albany, Mississippi Durham, North Carolina Fayetteville, North Carolina Fayetteville, North Carolina Raleigh, North Carolina

Anderson, South Carolina Anderson, South Carolina Columbia, South Carolina Winnsboro, South Carolina Chattanooga, Tennessee Tullahoma, Tennessee

REGION V
Berwyn, Illinois
Calumet City, Illinois
Champaign, Illinois Chicago, Illinois Chicago, Illinois Chicago, Illinois Des Plaines, Illinois Evanston, Illinois Glen Ellyn, Illinois Hillside, Illinois Justice, Illinois Naperville, Illinois Niles, Illinois Northfield, Illinois Oak Brook, Illinois Richton Park, Illinois Rolling Meadows, Illinois Wood River, Illinois Chestertown, Indiana Columbus, Indiana Greenwood, Indiana Greenwood, Indiana Hamilton, Indiana Hammond, Indiana Hammond, Indiana Marrillville, Indiana Muncie, Indiana Muncie, Indiana Terre Haute, Indiana Brandon, Michigan Brighton, Michigan Detroit, Michigan Detroit, Michigan Detroit, Michigan East Lansing, Michigan Farmington Hills, Michigan Mt. Clemens, Michigan Redford, Michigan Rochester, Michigan Rochester, Michigan St. Clair Shores, Michigan Selfridge Air Force Base, Michigan Sterling Heights, Michigan University Center, Michigan

Warren, Michigan Bloomington, Minnesota Lake Elmo, Minnesota Minneapolis, Minnesota Proctor, Minnesota Roseville, Minnesota Roseville, Minnesota Roseville, Minnesota Roseville, Minnesota St. Paul, Minnesota St. Paul, Minnesota St. Paul, Minnesota Stillwater, Minnesota Wabasso, Minnesota Barnesville, Ohio Cleveland, Ohio St. Clairsville, Ohio Cumberland, Wisconsin Green Bay, Wisconsin Kimberly, Wisconsin La Crosse, Wisconsin Madison, Wisconsin Madison, Wisconsin Merrill, Wisconsin

REGI<u>ON VI</u> Bossier City, Louisiana Broussard, Louisiana Lake Charles, Louistana Lake Charles, Louisiana Albuquerque, New Mexico Farmington, New Mexico Maxwell, New Mexico Roswell, New Mexico Ardmore, Oklahoma Lindsay, Oklahoma Tulsa, Oklahoma Burkburnett, Texas Dallas, Texas Dallas, Texas Dallas, Texas El Paso, Texas Ft. Sam Houston, Texas Houston, Texas LaPorte, Texas Lubbock, Texas Waco, Texas

REGION VII
Des Moines, Iowa
Des Moines, Iowa
Des Moines, Iowa

Des Moines, Iowa Des Moines, Iowa Des Moines, Iowa Des Moines, Iowa Des Moines, Iowa Des Moines, Iowa Des Moines, Iowa Des Moines, Iowa Des Moines, Iowa Des Moines, Iowa Des Moines, Iowa Des Moines, Iowa Des Moines, Iowa Kansas City, Kansas Topeka, Kansas Wichita, Kansas Wichita, Kansas Kansas City, Missouri St. Louis, Missouri Omaha, Nebraska Pierce, Nebraska Sidney, Nebraska

REGION VIII
Security, Colorado
Bismarck, North Dakota
Bismarck, North Dakota
Bismarck, North Dakota
Wahpeton, North Dakota
Sioux Falls, South Dakota
Vermillion, South Dakota
Vermillion, South Dakota
Vermillion, South Dakota
Ogden, Utah
Salt Lake City, Utah

REGION IX
Mesa, Arizona
Mesa, Arizona
Phoenix, Arizona
Phoenix, Arizona
Phoenix, Arizona
Phoenix, Arizona
Alameda, California
Chatsworth, California
El Monte, California
Glendale, California
Long Beach, California
Los Angeles, California
Los Angeles, California

Los Angeles, California
Los Angeles, California
Mission Viejo, California
Sacramento, California
Sacramento, California
San Francisco, California
APO San Francisco
APO San Francisco
Santa Cruz, California
South San Gabriel, California
Stockton, California
Vallejo, California
Honolulu, Hawaii
Kaneohe, Hawaii
Sparks, Nevada

REGION X
Anchorage, Alaska
Anchorage, Alaska
Anchorage, Alaska
Pocatello, Idaho
Pocatello, Idaho
Pocatello, Idaho
Dallas, Oregon
Portland, Oregon
Portland, Oregon
Aberdeen, Wisconsin

