

Listen2hear



A resource for assessing and monitoring early listening and communication skills.

By the Sensory Service, Kent

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Introduction

Listen2Hear is a resource that has been created by the Sensory Service to guide teachers and Support Staff in supporting Hearing Impaired Children with the development of their functional listening skills. The resource will guide you through the 8 key stages listening skills development, from sound awareness to speech discrimination. Under each key stage you will find a description of the skill, reactions/behaviours to look out for followed by several suggested activities to promote each stage of the child's listening journey. In addition, at the end of the resource you will find a tool to use to monitor and record the child's progress. This resource is designed to complement the support that the child may receive from their Specialist teacher (HI) and may also be used by any staff working with a child with a hearing impairment.

1. Sound Awareness

Activity 1

Definition

Sound awareness is when a child is able to detect an independent sound source without any other sensory stimuli being present. The child shows his/her reaction to sound stimulus alone by changing his/her behaviour or actions. Such initial responses to sound may be involuntary, unintentional, reflexive and fleeting.

Examples

Examples of such responses are:

- startling
- blinking
- eyes-widening
- stilling or quietening
- facial twitch
- turning of head
- limbs moving suddenly or slowing
- change in sucking patterns during feeding
- stirring from sleep
- change in breathing pattern, etc.

(As the sound becomes more familiar, the child may become more interested and attentive to the sound and his/her responses will then become more specific and deliberate, i.e. voluntary. This is the next stage in learning to listen, which we have named 'Attending to Sound'.)

Be aware...!

NB When observing a child for responses for sound awareness, it is important to determine whether the child is responding to sound alone or to other sensory clues present at the same time such as tactile stimuli (e.g. vibrations, tapping, touch), olfactory stimuli (e.g. perfume, cooking smells) and visual stimuli (e.g. pointing, gestures, signing, sight of objects, pictures, others' actions, etc). In order to be certain that a child is responding to sound alone, other sensory stimuli must be known to be absent.

Desired outcomes

After a suitable timeframe for the learner to complete the outcome, will be able to respond to a variety of solitary sound sources. The child will be able to respond to a variety of different sound sources consisting of:

- **(a) indoor environmental sounds** - e.g. doorbell, telephone, washing machine, Hoover, TV or CD being switched on, microwave, noisy toys, sounds during food preparation, water running, individual musical instruments, knocking on the door, whistle, etc
- **(b) external environmental sounds** - e.g. aeroplanes, traffic noise, emergency vehicle sirens, animal sounds, wind/rain/thunder sounds, etc
- **(c) people's voices** - e.g. talking, singing, whistling, voices of familiar people such as parents and other caregivers

Possible short-term targets

(a) Child will be able to respond consistently to a familiar sound within the home or school setting, e.g. doorbell or knock on the door, without any other sensory clues being present.

Suggested activity – Play listening game using indoor sounds.

Adult shows child 4-5 pictures representing different familiar sound sources, e.g. pictures of someone knocking on the door, a bell ringing, a person clapping, a tap running, a person singing, etc. Child is shown each picture and the corresponding sound is then made so that the child can hear and see the sound being produced. The adult then makes one sound out of the child's visual field. The child must indicate which picture matches the sound. Praise if child is right or encourage to listen again if child is incorrect. The sound is then repeated for the child to hear and see.

(b) Child will be able to respond consistently to a familiar sound that is normally presented outdoors, e.g. sound of jet aeroplane flying overhead, police car siren, cow mooing, etc., without any other sensory clues being present.

Suggested activity – Play listening game using outdoor sounds.

Adult shows child 4-5 pictures representing different familiar environmental sound sources, e.g. pictures of a car driving past, a fire engine with blue light flashing, a cow mooing, sheep baaing, a duck quacking, etc. Child is shown each picture and the corresponding sound is then produced (verbally or via a CD player) so that the child can hear the sound and see the matching picture simultaneously. The adult then makes one sound out of the child's visual field. The child has to indicate which picture matches the corresponding sound. Praise if child is right or encourage to listen again if child is incorrect. The sound is then repeated for the child to hear and see.

(c) Child will be able to respond consistently to a familiar voice within the home or school setting, e.g. mother/father's voice, sibling's voice, teacher's voice, school friend's voice, teaching assistant's voice, etc. without any other sensory clues being present.

Suggested activity - Play listening game using familiar voices.

Adult shows child photos of 4-5 different people familiar to the child, e.g. pictures of mother/father, siblings, teacher, school friend, teaching assistant, etc. Child is shown each photo of the selected people, who also need to be present and they each say the same phrase in turn, e.g. 'Hello, child's name!' The people then say the common phrase individually out of the child's visual field. The child has to indicate which photo matches the corresponding voice. Praise if child is right or encourage to listen again if child is incorrect. The person then repeats phrase for the child to hear and see.

Helpful suggestions

- ✓ Ensure the child's hearing aids are functioning optimally by performing daily checks.
- ✓ Try to make individual sound sources as accessible to the child as possible by reducing, or ideally eliminating, all other sources of competing background noise, e.g. turn off the TV when focusing on listening to speech sounds.
- ✓ Help the child to have lots of focused listening experiences each day using a wide variety of different sound sources.
- ✓ Go on listening walks and encourage the child to see where different sounds originate from. Talk about what you can see and hear.
- ✓ Try to make listening activities as fun and as pleasurable as you can and incorporate, whenever possible, into normal daily routines.

- ✓ Note any sounds that upset the child and, if possible, try to reassure them by showing what has caused the sound and why.
- ✓ Maintain close eye contact with the child when talking to them and use lots of facial expression to show how you are feeling. Encourage all other family members, friends and staff to do the same.
- ✓ If the child makes attempts to vocalise, e.g. gurgles, coos, blows raspberries, babbles, imitate these sounds and show that they please you. Be as animated as you can! The child will enjoy this interaction immensely and so be motivated to vocalise even more.

Sound Awareness

Activity 2

Child will show a reaction to sound alone by a changing behaviour/action.

Be aware

Ensure/ observe that child is reacting to *sound* only and not a physical prompt.

The way children show responses can vary from child to child. Have knowledge of child's physical abilities.

Watch child's face for blinking, eye widening, turning, jumping, smiling etc

Note if another adult is needed to support the activity.

Be aware of child's general health and alertness

Take note of other competing noise and reduce background noise where possible.

Activities and short-term outcome:

After a suitable timeframe for the learner to complete the outcome, will react consistently react to a drum in quiet context.

- Familiarise child with drum and drum stick. Holding and banging.
- Explore banging different types of drum.
- Model how to use the drum clearly. Assist as appropriate with this.
- Demonstrate with another adult reacting to a drum beat by throwing a bean bag along the floor
- Demonstrate with another adult reacting to the drum beat by rolling a ball along the floor
- Try the activity with child, allowing time for them to process hearing the sound to it. Initially have the drum in view and then with drum behind them.
 - Assist pupil as required (making a note of their independent reactions to sound) and give opportunities for role-reversal/ drum banging.
- Praise for good listening

2. Attention to Sound

Child will move appropriately to the sound they hear.

Be aware of child's physical ability – if they are non - ambulant a second adult will need to support them.

Check the hearing loss (is it unilateral / one sided or bilateral –symmetrical / asymmetrical). If unilateral or asymmetrical locating the sound from their deaf / deafer side will be harder.

Activities and short-term outcome:

After a suitable timeframe for the learner to complete the outcome, will be able to discriminate between three different sounds and move appropriately:

- Have 3 beanbags – red, green and yellow.
- An adult models moving slowly as yellow beanbag is held up.
- An adult models runs as green beanbag is held up.
- An adult models stopping when red beanbag is held up.
- Practice this with the children many times.
- Praise for good looking.
- Repeat movements but when you show yellow beanbag introduce a slow drumbeat, the green one a fast drumbeat and one single loud bang for the red beanbag
- After a period of time repeat various drumbeats without the beanbag visuals...how do you move?
- Praise for recognition of sound / good listening.

3. Locating Sound

Activity 1

Child will be able to locate a single familiar sound in a quiet environment, then in a situation with background noise.

Be aware

- ✓ If using quiet conditions, ensure you are working in a quiet room (as little noise as possible from inside and outside the room); keep visual distractions to a minimum too.
- ✓ The way children show responses can vary from child to child, so you need to get to know the child and their usual way of showing responses.
- ✓ Match the desired responses to the child's abilities taking into account any other needs.
- ✓ Be aware of child's general health and well-being – for example have they slept well recently?

Activities and short-term outcome:

After a suitable timeframe for the learner to complete the outcome, will be able to locate a familiar sound in a quiet room.

- Present one familiar sound (a familiar adult calling the child's name, a favourite musical instrument or noisy toy or bell used in the child's class to mark change of activities) from one location in the room. Watch for the child's reaction – are they aware of the sound and do they respond to the sound?
- Repeat the sound a few times.
- Indicate the direction of the source and repeat the sounds when the child is looking and expecting it.
- Repeat the activity on several occasions, until the child responds to and locates the sound. Use phrases (spoken, signed or with VOCA as appropriate) to encourage the child, for example 'Where is the sound now? Listen...'
- Praise for 'finding' the sound.
- Repeat, over a period of time, until the child is confident in locating the sound each time.
- Repeat activities adding a different sound to the initial one, eventually progressing to 5 or 6 different sounds in one session.

Locating Sound

Activity 2

Child will be able to locate a range of environmental sounds, in quiet and background noise.

Be aware

- ✓ Ensure you are working in a suitable room, with some background noise that not too busy and visually distracting.
- ✓ The way children show responses can vary from child to child so you need to get to know the child and their usual way of showing responses.
- ✓ Match the desired responses to the child's abilities considering any other needs.
- ✓ Be aware of child's general health and well-being – for example have they slept well recently?

Activities and short-term outcome:

After a suitable timeframe for the learner to complete the outcome, will be able to locate a range of environment sounds in a quiet and background noise.

- Present one familiar sound (a familiar adult calling the child's name, a favourite musical instrument or noisy toy or bell used in the child's class to mark change of activities) from one location in the room. Watch for the child's reaction – are they aware of the sound and do they respond to the sound?
- Repeat the sound a few times.
- Indicate the direction of the source and repeat the sounds when the child is looking and expecting it.
- Repeat the activity on several occasions, until the child responds to and locates the sound. Use phrases (spoken, signed or with VOCA as appropriate) to encourage the child, for example 'Where is the sounds now? Listen...'
- Praise for 'finding' the sound.
- Repeat, over a period of time, until the child confident in locating the sound each time.
- Repeat activities adding a different sound to the initial one, eventually progressing to 5 or 6 different sounds in one session.

4. Tuning into sound including Ling Sounds

These are the ling sounds [m], [ah], [oo], [ee], [sh] and [s]. If a child is able to respond to and identify the Ling Sounds, they will demonstrate they are accessing sounds across the range of speech used in the English Language.

Remember

- These activities may be done with or without lip-reading. Always complete the activities with access to lip reading and your face first. Then move onto listening only (also called auditory only) when the child is confident doing the activities.
- The way children show responses can vary from child to child, so you need to get to know the child and their usual way of showing responses, take into account their additional needs and communication style.
- Be aware of child's general health and attentiveness.
- Note background noise and reduce it where possible, for example close windows if there is noise outside.

Activities and short-term outcome:

After a suitable timeframe for the learner to complete the outcome, will be able to detect and then identify Ling Sounds.

- Introduce the Lings sounds to the child at a good volume in conjunction with pictures or objects to represent each sound.
- Make the session fun by adding actions to sounds until the child is familiar and responsive to range of sounds (moo, ah, ee, s, sh)
- Play activities until the child is aware of and responds to sound in their own way.
- After the child is familiar with games and can detect the different Ling sounds move onto identifying the individual sounds. Start with two, that sounds quite different and play games using them, showing the contrast between them.
- Then test if they know the sounds by saying a sound and the child pointing to the appropriate pictures or picking up the correct object representing the sound. A child may make a sign or gesture to represent a sound also.
- Then introduce two more sounds at a time and test for identification. Continue until the child identifies all six ling sounds.

5. Attaching Meaning

Activity 1

Attaching Meaning

The child will respond purposefully to key sounds.

e.g. Turning to a knock on the door with anticipation, responding by looking towards a lunch box or coat when the bell rings, shows different responses to different tones of voice, react to sound stimuli used to gain attention.

Be aware of sound levels.

Background noise.

Activities and Short-Term Outcome:

After a suitable timeframe for the learner to complete the outcome, will be able to attach meaning purposefully to a range of sounds.

Once the child is responding to sound, their awareness of sound and attaching meaning to sounds can be developed. The following is an early activity to develop this.

You will need:

A toy car (brmm brmm)

A toy train (choo choo)

A toy ambulance or fire engine (nee naa)

Choose one of the above noises to work on, for example, brmm brmm. Push the car along the floor or table repeating brmm brmm. Play this game repeatedly. You can vary the game by pushing the car towards a box with a hole cut in it and stop using your voice as the car disappears, when the car reappears make the brmm brmm sound again. Once the child has got the idea of the game give them their own car and play alongside each other.

Repeat the game using the other toys.

Remember to always give the child plenty of time to respond.

Always show delight at any response the child offers and repeat the sound back to them for reinforcement and encouragement.

Attaching Meaning

Activity 2

Definition

The child is able to understand the meaning of a sound and respond purposefully. They show different responses to different tones of voice and react to sound stimuli used to gain attention. As the child becomes more familiar with the sounds, they may also show signs of emotional anticipation.

Examples of response:

- Turning to knocks on the door with anticipation
- Looking to their coat when the doorbell rings
- They sit at the table ready to eat when the microwave pings
- When a transition song is played in nursely they attend and start to tidy up

Be aware!

As with the earlier skill of awareness, it is vital that there are no other clues which the child may pick up rather than just the sound. Shadow provides a visual clue and you need to be sure that the child cannot see any to be sure they are locating the sound on its own. Also ensure the sound offered is at an available frequency to the child.

Helpful suggestions:

- ✓ Check that the amplification is are working and fit well
- ✓ Offer sound in a quiet place away from other distractions
- ✓ At first, visually illustrate some known sounds to support the child's ability to attend, then offer just auditory stimuli, tracking their responses
- ✓ Make games and activities short as listening is demanding
- ✓ Note initial response and then again if this changes, and if the child becomes more involved in the activity e.g. from a look to a point or bending of body to 'find' the sound
- ✓ Continue voice commentary and positive comments and make the activity fun, repeat over the week with variety
- ✓ Aim to watch for this skill when the child is in a range of environments to see if they are still able to attach sounds to meaning

Outcomes:

After a suitable timeframe for the learner to complete the outcome, will be able to attach meaning and demonstrate this understanding by responding appropriately to a range of familiar sounds and voices.

Possible short-term targets:

- hear environmental sounds beyond their eye line and show anticipation, by looking towards door etc.
- link a sound beyond their eye line, with an event
- link a significant voice beyond their eye line, with a negative or positive emotional response
- link a range of familiar voices beyond their eye line, with negative or positive emotional response
- make an action or response that demonstrates they can identify what will happen next.

Attaching meaning will always be easier for the child if they are motivated. So, pick an activity that the child gains reward from and supports them to get what they desire.

Suggested activities to link sound and response for this section:

Voice – family members, friends, neighbours etc.

- able to attach meaning to a sound that indicates doorbell/phone sounds to know someone is coming or mum will be leaving the room

Repeat for any toy with a sound effect

Repeat for the noun of any item you want them to learn. Teach in category

Ready steady go – something happens – bit inconsistent?

1. A noise to indicate a transition
 - a. Clunking cutlery, the table is being set so the child sits up ready for food
 - b. Music on the washing machine to indicate it is finished so the child can open the door
 - c. 'tidy up music' used in the nursery
 - d. a bath running, the child takes their clothes off
 - e. a microwave pings – dinner time
 - f. signature tune of a television or film plays
 - g. crossing alert sounds, green man flashes and carer steps out
2. A noise to predict an action, object or toy
 - a. Make animal noise then take it out of a feely bag
 - b. A dog barks, child looks out of the window
 - c. Two steps.....'tickle under there'
3. A noise that will result in a carers action
 - a. The doorbell rings – carer answers the door
 - b. A car pulls up on the drive - carer says 'Daddy's home'
 - c. Mobile phone ring tone, Mum moves/picks up the phone

- d. The Hoover is switched on, Dad vacuums
4. A voice to indicate meaning and an emotional response
- a. Family photographs for listening and matching names to picture
 - b. Family photographs for listening and matching emotions to picture – eg having fun on the bouncy castle
 - c. Read books with different voices – a scary giant, a timid mouse etc
 - d. Use exaggerated voice tone for emotional responses to everyday events such as surprised, sad, happy, scary....
(Of course, undertaken with care)

6. Transferring Attention

Child will discriminate and respond to speaker's voice from competing stimuli.

Examples: Teachers talking sound to class and TA speaks to child – child turns to TA when listening to music, child turns to look at adult who starts speaking.

When in presence of background noise

Child will actively choose which sound stimuli/s they will pay attention to

E.g.: turning from chatting/ interacting with friends to listen to teacher

Be aware

Of the time when the child is more responsive such as after food/ nap etc. Which lessons/activities is this more noticeable?

Ensure child is not following others.

Activities need to be taught in a quiet environment initially so that the child is aware of the voices of the staff.

Use photos to prepare the listening activity.

Activities and short-term outcome:

Short term Outcomes

After a suitable timeframe for the learner to complete the outcome, will be able to turn to their name when it is spoken in their class.

After a suitable timeframe for the learner to complete the outcome, will be able to actively choose which sound stimuli/s they will pay attention to.

Activities

- In a quiet room, familiarise child with the voice of the member of staff
- Demonstrate the response you want e.g. pointing or eye pointing to the relevant picture when the voice is recognised

Once you are sure child knows the Class teacher, Teaching assistant or physio's voice, then they can work in their classroom, with the classroom noise.

- Turn to name
- Turn to activity clue card – dinner, break, swimming
- Note when child turns to name in noise. Is it AM or PM? What time of day are they more responsive?
- Does the child look towards or turn towards person or voice?
- Can they transfer attention from act to person?
- Reward good listening as shown by location behaviour and then again when attention has been transferred.

7. Sound Discrimination

1) Long/short

Collect some instruments/noisy toys and make two cards.

One with a long-bodied shape with eyes and the other a very short body shape with eyes. (Mr long and Mr Short) Start with making moo's and sss snake sounds with the animal toy. (baaa, mieou, etc) go through the animal box and pick out a few of each – long calls and short ones

Then a woof, cluck, snort, quack you get the idea.

Child can listen while holding the animal toy and as you make the sounds, indicate which card it matches. Use the words long and short with the sounds.

Eventually the child will be able after matching the toy to the correct card, to indicate or say if the sound is long or short.

N.B. this is part of the post implant discrimination programme too.

You can develop this to sounds around the room/home e.g. doorbell long press or a short press with the child and with them listening with the cards. Toys that bleep short/long duration. Family members names grandma, Dad etc

Then you will be looking at discrimination between words of long/short duration. E.g. dog v elephant so with pictures/toys, bus/baby/butterfly etc.

Refining the child's listening and discrimination skills until they can differentiate between the minimal pairs sheet we use (mouse/house, rake/cake etc)

2) Quiet/loud

With this activity you need to know the level of the child's hearing as a child with a hearing loss however mild may struggle with certain sounds so speak to your sensory link.

Again, two cards one with its finger over its mouth and one with a big open mouth (Mr Quiet and Mr. Loud)

See how quietly the child can make a sound (box of toys/instruments/hand on tray etc) and show the card etc and a loud one and show the card. Can use voice for this if it doesn't disturb anyone else whisper/shout ask the teacher of the deaf to demonstrate the FF audiometer and listen and decide with the child what sounds quiet and what is loud.

Older children can use the pictorial audiogram which shows which sounds are made where. From very quiet leaves rustling to a road drill for example. Those with a visual memory of objects may be able to suggest where sounds they know/can identify may be on the form.

Can divide the animal toys into loud ones (lions, seagulls etc) and quiet ones (mice, tortoise etc) discuss activity cards sleeping v singing for example. Using a drum make loud noise and quiet noise see if the child can make the right sound when you ask or indicate the card.

Listening walks can be planned to find certain sounds (a long sound and who can find a quiet sound). All helps to increase vocabulary and experience of listening to the world around when they are walking or being wheeled round.

3) High and Low

This requires more knowledge and musical instruments so the music teacher may be happy to set up activities to show the difference. Some children do not like high pitched sounds, so you need to know your child/student. Most children can access a piano or xylophone and there are several amazing apps for phones and tablets that look at sounds and their pitch.

So two cards one with very long legs and a little body at the top of the card can denote high pitch (you will have better ideas I am sure) and one with a body with very short legs and low to the ground (Mr High and Mr. Low) anyway give examples and see if the CYP is aware it is high or low you can work up and down the scale and place the cards at either end of the keyboard.

Listen to animal noises, there is an excellent animal listening lotto which has several animal calls and roars to match to a picture. listen to each other's voices who has a low voice? Normally a man or listen to a child which may appear high.

Compare school bells with the caretaker dragging something heavy across the playground, or the lawn mower sound and the bike bell. Again, a listening walk gives time to experience sounds around and with a camera you can take pictures to talk about when you get back and divide into groups loud sounds, or low sounds etc.

These can be part of sensory lesson plans, but the activities can be carried out when there is a quiet moment, or you are out and about especially if you are aware of a good sound that not everyone will have noticed.

8. Speech discrimination

Activity 1

Speech Discrimination

The child will be able to recognise and discriminate between a range of speech sounds.

e.g. Being able to discriminate between two speech sounds is the first step towards understanding speech.

Be aware of reducing background noise during these activities.

Activities and Short-Term Outcome:

After a suitable timeframe for the learner to complete the outcome, will be able to discriminate reliably between two speech sounds.

Early on visual clues such as facial expression, natural gesture, signs and lip patterns will help the child to discriminate between sounds. The intention is for the child to develop the skills to discriminate the sounds by just listening.

You will need:

Farm animals

Two boxes or containers

Bricks

Choose two different animal sounds to work on with the child e.g. miaow and quack quack. Play with the relevant animals and demonstrate the noises as appropriate during the session. When the child is familiar with the sounds you are ready to extend the game.

Draw a picture of a cat and stick it on one of the boxes. Draw a picture of a duck and stick it on the other box.

Whenever you say, miaow the child should put a brick in the box with the picture of the cat on it and the same when you say, quack, quack put a brick in the box with the duck picture on it. (If you have enough small animals you could use these instead of the bricks or pictures of animals).

Repeat the game by using other pairs of animals e.g. Moo/Woof woof.

Give the child plenty of time to respond, repeat their contribution and offer lots of encouragement.

Speech discrimination

Activity 2

Child will be able to recognise and discriminate between a range of speech sounds.

Be aware

Look for consistent responses

The way children show responses can vary from child to child, so you need to get to know the child and their usual way of showing responses

Match the desired responses to the child's abilities considering any other needs

Be aware of child's general health and alertness

Take note of other competing noise and reduce background noise where possible.

Activities and short-term outcome:

After a suitable timeframe for the learner to complete the outcome, will be able to recognise and discriminate between all six Ling sounds.

- Collect six medium size toys that can be handled by child. Each of these will link to a Ling sound, e.g. a teddy or aeroplane for 'Ahh' and a mouse for 'Eee'.**
- Use lots of short sessions to familiarise child to toys and present the sound that links to each one. Let them handle and play with them.**
- Try to ensure that the child can see you clearly as you present the sounds. Initially they need to see your lips and have time to process the sound and the toy and start to make a link. Give lots of praise for listening.**
- Move onto presenting two toys at a time and model choosing the one that links to a sound. You may need to involve another adult/child to do this. Make sure child can see your lips initially.**
- Build up the toys presented as appropriate but be aware if child becomes confused.**
- If the child becomes confident, try with lip patterns removed for sound recognition/discrimination only.**

Please see Appendix 1 for more information about Ling sounds

Listen2Hear Monitoring Sheet

	Baseline ----/----/20--	Review date 1 ----/----/20---	Review Date 2 ----/----/20---	Review date 3 ----/----/20---	Comments
Sound Awareness	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	•
					•
					•
Attention	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	•
					•
					•
Locating	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	•
					•
					•
Tuning	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	•
					•
					•
Attaching Meaning	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	•
					•
					•
Transferring Attention	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	•
					•
					•
Sound Discrimination	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	•
					•
					•
Speech Discrimination	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	•
					•
					•

Name: _____

Date of Birth: _____

Recommendation for review period* _____

Additional Comments

Specialist Teacher: _____

Contact Details: _____

Explanation - Levels of Intensity

1. Does not appear to respond 2. Child responds occasionally 3. Frequent but intermittent response 4. Almost consistent responses

*eg Review after 6 weeks / 2 terms of intervention.

Appendix 1 – Ling Sounds



ahhh



ooo



eeee



shhh



ssss



mmm

The Ling's Six Sound Test uses familiar speech sounds that would broadly represent the speech spectrum from 250-8000 Hz. This is the same range we test by conventional audiometry in clinic. Ling sounds use isolated phonemes to target low, middle and high frequency sounds. Therefore, it is useful for assessing access to the speech sounds as well as developing listening skills. The phonemes for the Ling Six Sound Test are [m], [ah], [oo], [ee], [sh] and [s]. These can be used in different ways; from initially conditioning a child to listen, then recognize the Ling sounds.

Appendix 2 – Room Acoustics

Improving Listening Conditions – small changes that can make a big difference.

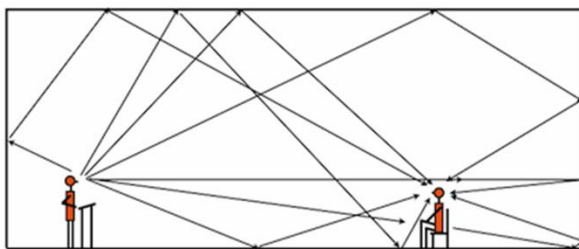


Did you know... Children with hearing impairments require speech to be between 20-30dB louder than the background noise if they are to effectively process spoken language. This is quite a bit louder than we need as adults with a fully formed understanding of language!

2 main things affect room acoustics:

- **Ambient (background) noise**
- **Reverberation**

Ambient noise can include things like radiators, fans and whiteboard projectors, but it can also come from the adults in your room moving about and having conversations, or from the other children. If the doors/windows are open, noise can come in from outside.



Reverberation is when sounds “bounce back” from surfaces, arriving at the ear a little later than the original source.

These can make it harder to interpret speech.

Some tips to improve listening conditions in your classroom:

- Add some cushions, fabrics or plants – reverberation is worse from hard, smooth surfaces.
- Monitor the listening environment – are there any background noises you could eliminate by “switching off” when things aren’t being used?
- Be mindful of people moving and talking around you, especially when you are trying to do targeted listening work.
- Make sure your Hearing-Impaired pupils are close to the sound you want them to hear, and away from the distracting noises!
- Learn about your pupils’ hearing abilities and use any audiological equipment they have been given.



Appendix 3 – Use of Resonance Boards

According to the internet “the speed of sound, or of acoustic travelling waves, with dry air at sea level at 0 degrees Celsius is approximately 331.4 metres per second.” That is fast! Sound is ephemeral, there and gone, information is given but if not interpreted by the brain, it is lost. For C/YP who have a hearing loss this speed can be too fast to be perceived and processed. For a C/YP who cannot understand or process language this input becomes irrelevant and so is lost. This is where the use of a resonance board can be vital in helping them to experience sound through their bodies.

Resonance boards made of a flexible board which supported by a strong frame which raises the board above the ground. The learner is positioned on this and then input is offered such as tapping on it, using instruments or exploring items like balls or toy cars. The learner will be able to experience the sound of object placed on the board though sound and by resonance that they will feel through their body.

Here are some facts about a resonance board

- The sounds which the child produces on the resonance board will be transmitted through the fibres of the wood and will hit the child on other parts of its body.
- The sounds will get a prolonged and reinforced effect which is important to the child’s motivation for increased activity.
- The board gives a prolonged reaction to the child’s activities
- The air gap also has an insulated effect to the cold floor.
- The weight of the child will result in a little bending of the board downwards which will make beads roll back again when they are made to roll to the edge of the board by the body movements of the child.
- The child will have the opportunity to develop an understanding of space by learning the size of the board through the resonance received.

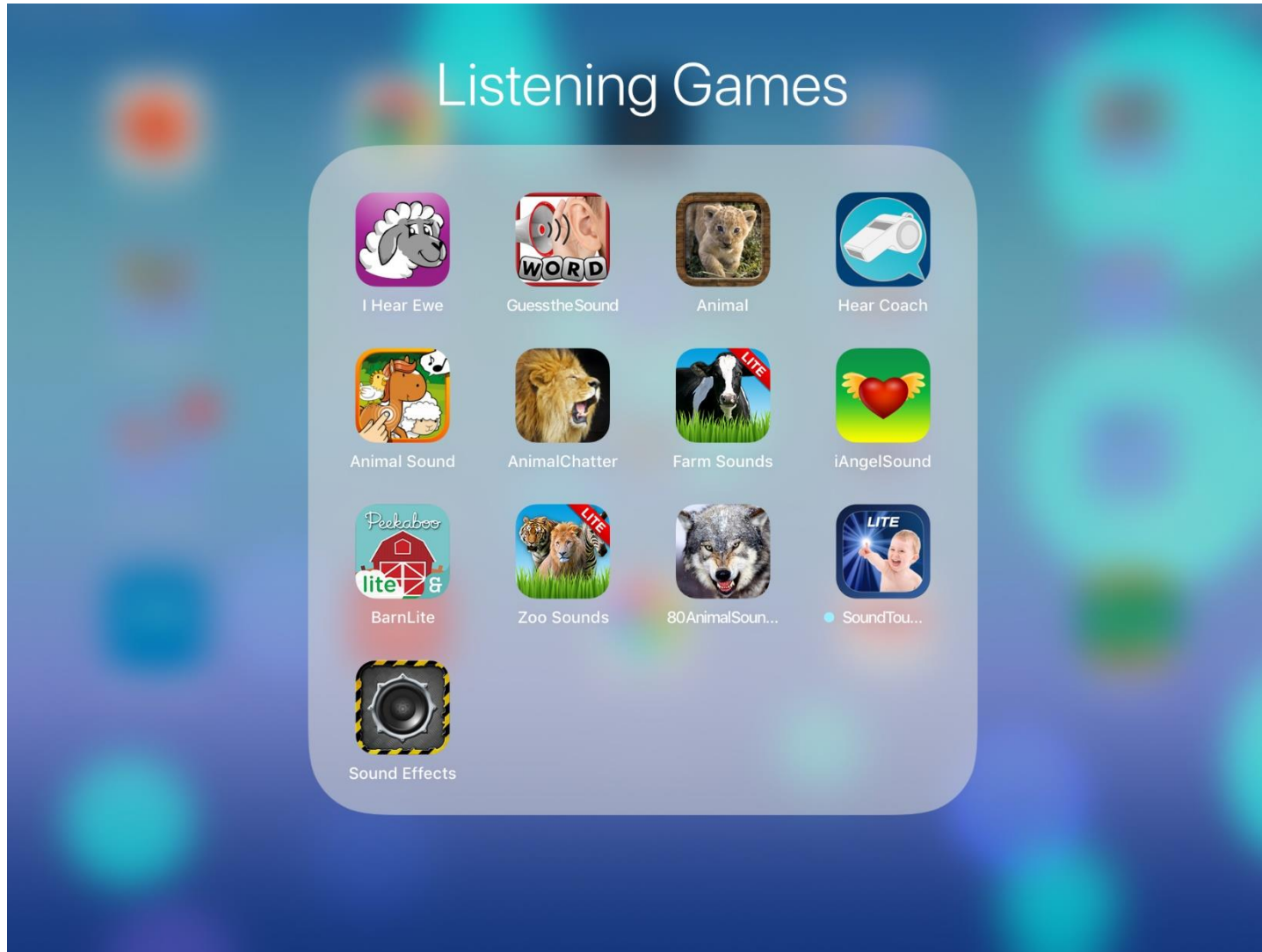
When a C/YP with hearing loss is situated in a resonant space they will be able to feel sound as well as hear it because they receive vibro-tactile feedback. The input will travel through their body and give them the slower feedback that gives them a chance to perceive, experience and respond to the input. The chance to respond and the recognition of the response is the key aspect of using resonance.

I have seen amazing response from many learners I have worked with. With a learner who was blind and had hearing in only 1 ear, it was possible to help her to find objects through the vibro-tactile feedback. She also experienced the weight of objects by dropping them on the board as she sat on it and dropped the items around her. For very complex learners, the vibro-tactile feedback has given them experiences which they have clearly responded to and shown a unique positive reaction. Some of these learners have shown movements that they had not made before or facial expressions that showed interest and enjoyment. It is fantastic to be part of this activity.

You can use lots of materials on the Resonance board; you can run cars on them, play instruments like a singing bowl or a dream drum, shaker eggs; you can use brushes, balls, wind-up toys, battery operated spinners, almost anything. What matters it that you match it to the needs and interests of the learners you are working with. That is part of the magic of resonance. Try it.

Catherine Marshall ST MSI.

Appendix 4 – Useful Apps



Further Information

More information and support can be found at the following places:

NDCS

www.ndcs.org.uk

SENSE

www.sense.org.uk

Ear Foundation

www.earfoundation.org.uk

Elizabeth Foundation

www.elizabeth-foundation.org

KDCS

www.kdcs.org