

Supporting the achievement of hearing impaired children in early years settings

For professionals working with children aged 0 to 4



Our vision is of a world without barriers for every deaf child.

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Introduction

The National Deaf Children's Society uses the word 'deaf' to refer to all levels of hearing loss. We include pupils who may have been identified as having a hearing impairment in the School Census.

With the right support, commitment and encouragement from families and professionals, deaf children can develop and achieve as well as any other child. This resource provides you with information on how you can help deaf children in your care to achieve good outcomes.

Who is this resource for?

This resource is for anyone working with children with a hearing impairment in any early years setting, including:

- nursery
- playgroup
- parent and toddler group
- crèche
- pre-school
- short break settings
- at home, if you are a childminder.

Staff in these settings will have valuable childcare experience that will benefit deaf children, although deaf children also have specific needs that are different from hearing children.

This resource aims to help you:

- understand the needs of a deaf child
- make sure the environment and activities in your early years setting are accessible for deaf children
- enable the deaf child to make progress towards achieving early learning goals, particularly in the area of language development
- make sure any hearing technology used is working to its maximum potential
- know where to go for extra support
- ensure that your provision can effectively meet the needs of deaf children.

Effective provision

Effective provision for any deaf child will entail:

- a thorough assessment of the child's needs and strengths
- a plan outlining how the setting will meet those needs and overcome any barriers to the child making good progress
- effective implementation of the plan
- a review of the child's progress and the success of the plan to establish whether changes need to be made and what these are.

In England, this 'assess, plan, do, review' cycle has been incorporated into statutory guidance set out in the Special Educational Needs and Disability Code of Practice (2015). Using this resource will help you to demonstrate how this approach is being followed.

More information about the assess, plan, do, review cycle can be found in Appendix 4.

This resource will also support you in making the relevant early years curriculum accessible to a deaf child:

- Early Years Foundation Stage in England
- Foundation Phase in Wales
- Foundation Stage in Northern Ireland
- Curriculum for Excellence, Early level in Scotland.

Individual templates and checklists contained in this resource can be downloaded from the National Deaf Children's Society's website at www.ndcs.org.uk/supportingachievement.

Early Years Matters, a short film for early years practitioners, also provides an introduction to deafness as well as advice on how to support deaf children in your setting.

www.ndcs.org.uk/family_support/order_and_view_our_publications/early_years_matters.rma

NOTE

In different parts of the UK, the terms 'special educational needs coordinator' or 'additional learning needs coordinator' are used.

For simplicity, this resource uses 'SENCO' throughout.

NOTE

We use the term 'parent' to refer to all parents and carers of children.

Deafness and its impact on learning

Deaf children cover the whole range of ability. Deafness is not a learning disability and deaf children have the potential to attain and achieve the same as any other child, given the right support. However, as most teaching and learning takes place through the main senses of sight and hearing, this presents deaf children with particular challenges when trying to access teaching and learning.

Deaf children have a diverse range of needs, including the type of hearing technology used and their preferred way of communicating. It is therefore important to find out from parents and the Teacher of the Deaf what the specific child's needs are and their impact on learning.

Levels and types of deafness

There is considerable variation in the levels and types of childhood deafness.

Children who are deaf may have a permanent mild, moderate, severe or profound hearing loss in one or both ears or a temporary loss such as glue ear.

The Teacher of the Deaf will be able to explain the individual deaf child's level of hearing by showing you an audiogram. An audiogram is a chart used by an audiologist to record the results of the hearing assessment.

It is estimated that at any one time 20% of children in reception have glue ear (a temporary hearing loss) and may miss 20 to 50% of what is being said.¹

Further details on the types and levels of deafness are given in Appendix 1.

A note on children with a mild, unilateral or temporary hearing impairment

In many areas these children do not receive regular support from Teachers of the Deaf. Many children with a mild hearing loss or glue ear do not wear hearing technology. As a result there can be a tendency to underestimate the impact of their deafness. In many cases these children have normal speech and language development in the early years and they do well. However, for a significant number mild, unilateral or temporary deafness can have an adverse impact on their development if their hearing needs are not supported.

1. Clinical Guideline, National Institute of Health and Clinical Excellence (2008) *Surgical Management of Otitis Media with Effusion in Children*

The impact of these losses could include:

- difficulties in hearing speech on one side and locating the source of sound
- difficulties in understanding speech where there is background noise or more than one person is speaking
- the need to ask for things to be repeated
- a tendency to be tired and irritable with a lower attention span resulting from the strain of trying to hear
- a possible reluctance to join in group discussions and activities
- speech, language and literacy difficulties.

Adults can sometimes find it difficult to understand the impact of mild hearing loss on children. This is because the adult brain is much better at filtering out background noise in noisy conditions than a child's. In addition, the adult brain is very good at filling in the gaps of missed information – speech sounds or parts of words – that weren't heard. Children with mild deafness are not able to do this – they lack the knowledge, vocabulary and context to be able to fill in the gaps. This means they miss out on a lot of the new vocabulary and concepts being taught every day in an early years setting.

Hearing technologies

Deaf children use different types of personal hearing technology supplied by the NHS such as hearing aids, bone conduction hearing systems or cochlear implants. More information about the hearing technology that deaf children may use can be found in Appendix 2.

The audiologist will have assessed and recorded how much the deaf child can hear with their hearing technology fitted. However it is important to understand that while the hearing technology used is set and programmed to enable the deaf child to access sound as near to typical hearing levels as possible, it does not replace normal hearing.

Acquired deafness

Children may acquire a permanent deafness after birth. This might be caused by genetics, infection or following a serious illness, such as meningitis, and can happen at any time. It is important for early years staff to look out for any possible signs of deafness. It is also essential to monitor deaf children's hearing levels in case of deterioration.

Identifying deafness

Children may arrive in your setting without having been identified as having a hearing loss, or acquire a permanent hearing loss during the early years. It is therefore important for school staff to look out for any of the possible signs of deafness.

The following may indicate a potential hearing loss.

- Does not come when called.
- Watches faces/lips intently.
- Constantly says “What?”
- Does not follow simple instructions or follows instructions incorrectly.
- Watches what others are doing before doing it themselves.
- Appears to watch and follow peers rather than hearing instructions directly.
- Talks either too loudly or too softly.
- Appears inattentive or as though daydreaming.
- Makes little or no contribution to group discussions, e.g. during story time.
- Rubs ears or complains about not being able to hear.
- Tires easily.
- Becomes frustrated easily.
- Seems socially isolated and less involved in play with other children.

Children with temporary hearing loss may demonstrate these behaviours intermittently.

If any member of staff is concerned that a child may have an undiagnosed hearing loss the early years setting should discuss the matter with parents and suggest that their child is taken to the GP.

Deafness and additional needs

There is a relatively high prevalence of deafness in children who have learning difficulties or other disabilities. Often the child's deafness is overshadowed by their other difficulties. It is important to take steps to address the impact of the deafness so that they can access learning, communicate and socialise.

Impact of deafness on language

Childhood deafness has a major impact on learning spoken language, as it is usually acquired through hearing and vision together. Early newborn hearing screening and vastly improved hearing technologies have meant that more young children have the potential to use spoken language. However, this means their language, communication and learning needs may not be immediately apparent: relatively good speech may mask their level of linguistic ability.

The impact of deafness on a pupil will also be influenced by factors such as:

- the age at which they became deaf
- whether deafness was identified and managed early or late
- support from parents
- the quality of professional support they receive
- their cognitive ability
- personal characteristics, such as determination
- the functioning of their hearing technology and how often it is worn.

The impact of deafness on language development may mean a young child has difficulty being able to:

- make sense of what people say and understand what is happening around them
- learn to think things through and problem solve
- understand and express what they are feeling and manage their emotions.

Deaf children are likely to require additional support if they are to make the same progress as other children of a similar age and cognitive ability. Adaptations and strategies will need to be put in place that manage and minimise the impact of their hearing loss, develop their learning skills and lead to higher levels of achievement and development.

The table below provides more information about the impact of deafness on a child. It also gives some examples of strategies that settings can use to address these impacts. These are described in greater detail in later sections.

Teachers should be aware of:	Summary of possible teaching, learning and support strategies
Slower language development, both spoken and written with reduced vocabulary and understanding of words and concepts	<ul style="list-style-type: none"> • Know the child's language level from regular assessment. • Monitor and develop language skills. • Ensure effective use of hearing technologies. • Create a good listening environment. • Provide focused, individual/small group programmes as required. • Adhere to good practice when communicating with deaf children. • Involve parents in providing additional language practice.
Listening skills	<ul style="list-style-type: none"> • Ensure effective use of hearing technologies. • Create a good listening environment. • Ensure children start establishing phonological awareness.
Concentration/tiring easily because lipreading and listening require additional cognitive resources/energy for the deaf child	<ul style="list-style-type: none"> • Ensure effective use of hearing technologies. • Ensure pace and length of any learning sessions are appropriate for the deaf child. • Create a good listening environment. • Check level of understanding.
Literacy skills	<ul style="list-style-type: none"> • As above plus additional tuition. • Use specific programmes, resources and strategies to aid the learning of the deaf children.
Working memory	<ul style="list-style-type: none"> • Games, such as Kim's game,² guessing hidden objects from descriptions, pairs matching, etc. • Specific resources for training working memory that have been developed for deaf children.

2. en.wikipedia.org/wiki/Kim's_Game

Teachers should be aware of:	Summary of possible teaching, learning and support strategies
Processing time	<ul style="list-style-type: none"> • Ensure child has heard the task/request. • Give more time to process information.
Difficulties around incidental learning – deaf pupils may struggle to pick up what others are saying through casual listening	<ul style="list-style-type: none"> • Create opportunities for one-to-one and small group work in good listening environments.
Social skills	<ul style="list-style-type: none"> • Provide small group work requiring turn-taking under the supervision of an adult. • Ensure access to extracurricular activities.
Self-esteem	<ul style="list-style-type: none"> • Praise appropriately and genuinely, describing exactly the reason for the praise. • Use positive resources and toys promoting deafness.
Learning style	<ul style="list-style-type: none"> • Generally helpful to use multisensory approaches. • May need to allow additional time to ensure mastery of new concepts/learning.
Difficulties in following group conversations	<ul style="list-style-type: none"> • Provide additional communication support where required.

An effective setting will:

- understand the impact of deafness on learning and be proactive in reducing this impact as much as possible by using support strategies which enable effective teaching and learning to take place
- be confident in using hearing technology
- be aware of the indicators of a hearing loss.

Working together to support deaf children

Deaf children will receive support from a range of professionals. Early years settings can help to support the child by fostering effective multidisciplinary working in the following ways.

- Providing information on the child's progress to other professionals supporting the child. For example, letting audiologists know how well the child's personal hearing technology is working.
- Ensuring that all staff have, as far as possible, the time for necessary liaison with parents and other professionals who support the child.
- Providing appropriate facilities for professionals who come into school to support deaf children and young people, e.g. availability of rooms free from interruption and with good acoustics.
- Contributing to multidisciplinary assessments and any resulting support plan and subsequent reviews.

Parents

Parents will already play a vital role in supporting their child's communication and language development, and their learning in general. They therefore will also be able to provide useful information about their child's development, their child's hearing loss and its impact, and how their child is most effectively supported in their own home. In some cases the parent will have coordinated all the professional appointments, assessments and reports they have received to date, and will be best placed to communicate this information to you. You can find out more about how to form a partnership with parents on page 52.

Teachers of the Deaf

A Teacher of the Deaf is a teacher who has gained a further mandatory qualification in working with deaf children. The Teacher of the Deaf will have been working with the individual child since diagnosis, continuing this support in early years provision. The Teacher of the Deaf is there to:

- support and advise those who work with a deaf child on strategies to ensure they can learn and participate
- support the effective use and maintenance of hearing technologies
- undertake specialist assessments to identify the child's needs
- recommend improvements to the listening environment and access to learning activities

- provide deaf awareness training for staff
- provide advice and support for all areas of the child's development
- support and advise parents
- help coordinate liaison with other agencies involved with the child
- support transition to new establishments and to primary school.

Audiologist

The deaf child will have regular appointments with an audiologist, who will have assessed the deaf child's level and type of hearing loss and will also be involved in selecting the most appropriate hearing technology. It is unlikely that the audiologist will come to your setting but the Teacher of the Deaf can advise on the audiological assessment and its implications. Your observations of the effectiveness of the child's hearing technology will be an important source of information to help the audiologist support the child.

Speech and language therapists

Deaf children may also receive support from a speech and language therapist, who may assess and monitor their understanding and use of language, listening skills, speech production and vocal skills.

In some cases, the speech and language therapist may work directly with the child. In others, they will suggest programmes for the early years setting to implement and will visit to monitor the child's progress and suggest updates.

An effective setting will:

- ensure all staff are clear on roles and responsibilities in relation to the deaf child
- ensure that all relevant staff have received appropriate training to meet the deaf child's needs
- work closely with outside agencies, including the child's Teacher of the Deaf, to support the deaf child effectively.

Starting at an early years setting

To help ensure a successful start for the deaf child in your setting it will be helpful to:

- get to know the child's parents so that you can share knowledge and develop a support plan with them
- meet with the Teacher of the Deaf to identify the deaf child's individual needs and learning priorities and plan the necessary adaptations required within the early years setting and in any learning experiences
- undergo training in identified areas of need, with advice from the Teacher of the Deaf
- make adaptations to the environment (see page 31)
- make home visits for you and the deaf child to get to know each other
- arrange opportunities for the child to visit and familiarise themselves with staff and the environment
- tell other children about deafness and what they can do to help their peer communicate and socialise (a Teacher of the Deaf can provide advice on this)
- attend multidisciplinary meetings and individual meetings with the agencies who have supported the deaf child and their family to date in order to gather information and advice to support their specific needs.

Challenges for deaf children

Starting at an early years setting can be daunting for any child. For deaf children, there are extra challenges that they may encounter.

- New learning environments with listening conditions of varying quality.
- New staff to work with.
- Varying deaf awareness levels among staff and other children in the setting.
- New language.
- Making new friends
- Differing expectations of behaviour and independence.

It is important for the setting to work with the Teacher of the Deaf and the parents to collect all the relevant information and to develop a transition plan that helps overcome these potential challenges and ensure a successful start.

The transition plan

A good transition plan will:

- be prepared well in advance of the child starting to give time for the support arrangements to be put in place
- clearly identify the member of staff responsible for preparing the plan and coordinating its implementation
- involve the parents and address any concerns they have
- be based on a thorough analysis of the child's needs and strengths including information from specialist assessments where necessary (a checklist for collecting relevant information follows)
- set out what needs to be done to meet the child's needs including:
 - what should be provided (for example, hearing technology, staff training, further assessment, improvements to acoustics within the setting, opportunities to visit the setting, specialist support, etc.)
 - who in the setting is responsible for each identified action
 - timescale for delivery.



…❖ **Example checklist for collecting information to support the transition to the early years setting**

Transition to early years setting Information to support a successful transition	
Hearing and personal hearing technology	
Information required	Implications for transition plan
In this section record: Degree and nature of deafness: Un-aided hearing level: Aided hearing level: Ability to discriminate speech in different environments (for example, class, halls): Sounds/words that are difficult to hear: Personal hearing technology used:	In this section record: What needs to be done to improve access to sound, for example, providing radio aids, improving acoustics, using soundfield systems? What needs to be done to ensure optimum use of hearing technologies, for example, daily checks by staff of battery, tubing, etc.? What are the health and safety implications, for example, fire drills?

Communication	
Information required	Implications for transition plan
<p>In this section record:</p> <p>Preferred way of communicating in different locations and situations (setting, home, friends):</p> <p>Competence in preferred way of communicating:</p> <p>Lipreading ability:</p>	<p>In this section record:</p> <p>What needs to be done to support access to teaching and learning including, for example:</p> <ul style="list-style-type: none"> • seating position to allow for lipreading • using radio aids • ensuring good acoustics • using a soundfield system • advice/training for all staff • providing communication support workers with at least Level 3 qualification for children who use BSL. <p>What needs to be done to promote communication and social interaction with other children?</p>
Language	
Information required	Implications for transition plan
<p>In this section record:</p> <p>Levels of understanding of language:</p> <p>Level of expressive language:</p> <p>Vocabulary level:</p> <p>Grammatical constructions:</p> <p>Social interaction and use of language:</p>	<p>In this section record:</p> <p>How does this compare with hearing children?</p> <p>What are the implications for learning, for example, more processing time?</p> <p>If a gap exists, what targets should be set to close the gap and what support/ interventions are required to achieve them?</p> <p>What are the implications for teaching?</p>

Cognition	
Information required	Implications for transition plan
<p>In this section record:</p> <p>Non-verbal cognitive skills to:</p> <p>a) ensure staff have a better understanding of a child's cognitive ability and also have high expectations</p> <p>b) check whether or not there are other underlying learning difficulties.</p>	<p>In this section record:</p> <p>What needs to be done to address any other underlying difficulties the child may be experiencing?</p>
Progress in curricular areas	
Information required	Implications for transition plan
<p>In this section record:</p> <p>Progress in different areas. Are there particular strengths? Are there particular difficulties?</p> <p>This should be looked at with reference to the relevant curriculum for the child:</p> <ul style="list-style-type: none"> • Early Years Foundation Stage in England • Foundation Phase in Wales • Foundation Stage in Northern Ireland • Curriculum for Excellence, Early level in Scotland. 	<p>In this section record:</p> <p>Is more support required in particular areas? What targets need to be set?</p>

Social and emotional aspects	
Information required	Implications for transition plan
<p>In this section record:</p> <p>Level of social interaction:</p>	<p>In this section record:</p> <p>If levels are low how can they be increased?</p> <p>Do staff need advice on how to promote good communication between the deaf child and their peers?</p> <p>How to communicate?</p>
Parents' views	
Information required	Implications for transition plan
<p>In this section record:</p> <p>What are the parents' hopes, aspirations and concerns about their child moving to a new setting?</p> <p>What information and help do they think they need to support their child's move to a new setting?</p>	<p>In this section record:</p> <p>What information and opportunities are needed to help with the transition?</p>
Other considerations	
Information required	Implications for transition plan
<p>In this section record:</p> <p>Any other considerations, for example:</p> <ul style="list-style-type: none"> • any other difficulties, medical conditions or medication needs • attendance issues • behaviour issues. 	

Strategies that could be included in the transition process and plan

Assessing the child's needs

- Arrangements for assessing the child's needs including information from the parents and Teacher of the Deaf, supporting specialist services in health, education and social care, parents and the child.

Information for the parent

- Familiarisation/taster days with parents and possibly extra days to meet and get to know key staff members. These visits should be planned to enable the child to take part fully in the activities.
- Accessible information about the setting and photos of relevant staff and the setting. Information on who can help with any concerns.

Preparation in the early years setting

- An acoustic audit of any teaching and learning spaces, which identifies measures required to improve the listening environment.
- Ensuring that any hearing technology such as radio aids and/or a soundfield system is in place in good time.
- Arrangements for training and advising relevant staff – this could include deaf awareness training for other staff working in the setting.
- Arrangements for meeting social needs.
- Arrangements for having any additional specialist support in place for the start of term, if appropriate.
- Arrangements for providing staff from the early years setting with information on the child's needs and how they are best supported in accessing teaching and learning. An example of information that could be provided follows.

Once all the relevant information has been collected, the summary information should be shared with other staff. The following example information sheet could be distributed to staff (with the agreement of the child's parents).

Photo	General information Child: Imogen Lloyd Class: Next foundation intake Teacher: Miss Alexandra Teaching assistant: To be appointed
	Hearing loss and hearing technology <ul style="list-style-type: none"> • Mild hearing loss. • Will be introduced to radio aids when she starts in provision.
	Communication <ul style="list-style-type: none"> • Imogen can hear speech sounds in a quiet environment. • Spoken language is age appropriate.
	Challenges for Imogen <ul style="list-style-type: none"> • Picking up distant sounds. • Discriminating which voice is most important to listen to especially when there is background noise. • Understanding new vocabulary.
	Ways of helping Imogen access learning during lessons <ul style="list-style-type: none"> • Make sure that she is sitting close to where you are speaking and she can see your face at all times. • Ensure that she is fitted with the radio aid attachments and you are wearing the microphone correctly. Staff training to be provided by local authority support team. • Gain the cooperation of all children in her group to listen quietly. • Make as much use of visual aids as possible to illustrate what you are speaking about. When her new teaching assistant is appointed one of their key roles will be to prepare and/or support Imogen when unfamiliar vocabulary is used. <p>Remember:</p> <ul style="list-style-type: none"> • Make sure you are facing Imogen when you speak. • If there is a lot of background noise, she will have difficulty following what you are saying. It's better to wait until she is in a quieter place to give her any instructions or information or ask her questions.

A personal passport can be a practical and person-centred way of supporting children and young people. Examples of personal passports can be found at www.ndcs.org.uk/passport.

An effective setting will:

- recognise the additional challenges that deaf children may face in starting at an early years setting
- make sure that it has received all the necessary information well in advance of the transition
- develop a transition plan that identifies a lead member of staff responsible for ensuring that the move is successful for the deaf child
- ensure that the transition plan sets out what support needs to be provided to meet the deaf child's needs and that it is put in place. This includes ensuring that any necessary training is provided
- distribute relevant information on the deaf child to staff.

Making it easier for deaf children to communicate and listen

The importance of communication

The development of effective communication and language skills is at the heart of learning, as well as the social and emotional development of all children. Research shows that even a mild hearing loss can result in significant communication difficulties.³

Early years settings can provide excellent opportunities for every child to develop their communication skills. The deaf child may also need targeted support in small group or one-to-one activities.

It is important to know the child's communication needs. Appendix 3 has more information about different communication approaches that deaf children may be using. This chapter will be most helpful where deaf children communicate through speaking and listening. If a deaf child communicates using sign language, cued speech or uses a mixture of listening, speaking and sign language, you will need to take additional steps to ensure good communication within the setting, including, for example, employing staff with advanced sign language skills.

Good practice in supporting communication

Here are some ways to ensure clear and effective communication with deaf children who communicate through speaking and listening.

- Make sure you have the child's attention before you start talking.
- Speak clearly and at your normal pace. Speaking too slowly or exaggerating your mouth patterns will make it harder for a deaf child to understand you. Shouting and whispering also make mouth patterns more difficult to understand.
- When speaking directly to the deaf child always get down to their eye level so they can focus on your speech and tune in to what you are saying.
- Ensure that the deaf child is sitting at an appropriate distance from you – hearing technologies have an optimal range of one to three metres in which to access speech clearly.

3. Ear Foundation (2015) *Experiences of Young People with Mild to Moderate Hearing Loss: Views of parents and teachers*. Available from www.ndcs.org.uk/research.

- Allow the deaf child to see your face and lips when speaking. Putting something in front of your face or turning away will make it difficult for a child to read facial expressions and lip patterns to follow what is being said.
- Ensure you are not standing with your back to a light source, as a shadow cast across your face can obstruct the deaf child's view.
- For those deaf children who rely particularly on watching your face when you speak, allow them time to move their attention between you and visual support.
- Manage visual distraction, especially with younger children. For instance, think about what you are going to wear, because brightly coloured clothing or large jewellery may be distracting.
- Seek advice from a Teacher of the Deaf on ways of communicating to meet the child's needs, for example where English is an additional language or the pupil has additional needs.

Involving peers

Successful communication with other children plays an important part in every child's social and emotional development and inclusion. Deaf children will need support in this area. You may need to monitor how well the deaf child is able to communicate with their peers and how well they respond. Decide with the Teacher of the Deaf what support may be necessary to enable effective communication. This may include the following.

- Providing information to other children so that they know how to help the deaf child communicate and how to socialise with them. A Teacher of the Deaf can provide advice on this.
- Encouraging even the youngest of children to follow your lead in not covering their faces with hands, hair or objects or looking away when speaking.
- When appropriate, making sure that any teaching is as visual as possible and using sign language with all the children in your setting – this will benefit everyone.
- Making 'quiet zones', where lower levels of noise are encouraged and established, and deaf and other children can take part in quieter activities, such as sharing books, completing puzzles or talking.
- Making specific observations of how the deaf child is able to communicate most effectively with their peers or when communication has been difficult, in order to inform communication activities.

Making the most of hearing technology

Hearing technology, such as hearing aids, cochlear implants and radio aids (see Appendix 2 for details on types of hearing technology), considerably improve access to sound and make a crucial contribution to a deaf child's development of language, communication and learning.

However, hearing technologies do not replace normal hearing. Deaf children will still experience difficulties in hearing what adults and other children are saying.

The child will only benefit from hearing technology if it is:

- working properly
- worn consistently
- set or programmed correctly to match the child's hearing loss
- worn in a good listening environment.

Each deaf child will have regular appointments with their audiologist, who will monitor the effectiveness of the child's hearing technology and make necessary adjustments. You will have an important part to play in ensuring that the deaf child is gaining maximum benefit from wearing their hearing technology. In particular:

- all staff need to understand how to use hearing technologies and their limitations
- a few key members of staff should receive ongoing training to enable them to manage, monitor and maintain the hearing technologies on a day-to-day basis.
- knowing what to do if the technology stops working and when to seek advice from a Teacher of the Deaf or audiologist if they are unable to rectify the problem
- staff should communicate regularly with the child to find out how they feel the technology is working and make regular observations to see if there are any changes in their response to sound. This is particularly important with younger children, who may not articulate their concerns over equipment failure
- supply and visiting staff should be offered guidance and advice.

Radio aids

Many deaf children may benefit from using a radio aid with their hearing technology. The teacher's voice is picked up by a microphone (that they wear) and fed into a receiver attached to the child's hearing technology.

When using radio aids you should remember to:

- switch the transmitter on when talking to the whole group in which the deaf child is working
- wear the microphone about 15cm from the mouth
- switch it off or mute the microphone when having a conversation that the deaf child does not need to hear (the signal can travel some distance and even through some walls)
- avoid standing in a noisy place, such as next to an overhead projector or open window, as the microphone will pick up background noise and transmit this to the deaf child
- avoid letting the microphone knock against clothing or jewellery.

In the UK, education providers are responsible for providing radio aids, not the NHS.

The Teacher of the Deaf can advise the school on how to check and maintain the technology, ensuring it is at the correct setting and that it is used effectively. They can liaise with audiologists, cochlear implant centres and suppliers if problems arise.

For further information see the National Deaf Children's Society's resource *How Radio Aids Can Help*.

Effective use of technology in your setting

How can I make sure the technology is working properly?

It is important that there is a member of staff who takes responsibility for a daily equipment check and ensuring the technology is working properly. Parents, a Teacher of the Deaf or an audiologist will be able to advise you so that you can:

- undertake regular checks, including checking batteries
- maintain a supply of accessories such as spare batteries, puffer, etc. to ensure the technology functions, letting staff know where to find them.
- implement basic troubleshooting solutions
- keep the technology clean, i.e. free from sand, water and general dirt
- know what to do or who to contact if the technology stops working
- make regular observations of the child to recognise any changes in their response to sound that may indicate their technology is not working. This is particularly necessary with young children, who cannot articulate that this might be the case.

For further information see the National Deaf Children's Society's resource *Hearing Aids: Information for families* and short films demonstrating how to care for equipment.

www.ndcs.org.uk/howto

How can I make sure the technology is worn?

All technologies need to fit securely and be worn regularly. Some young children will be very attached to their hearing technology but others may protest and remove them when you are not looking. Keeping the hearing technology in place on a small child's head and deterring bad habits such as pulling off or chewing components is part of the challenge that you will have, but parents and audiologists may be able to pass on tips.

Measures that can help include:

- use of 'huggy' attachments that fit over the ear and are supplied by the audiologist
- use of double-sided tape suitable for skin, such as wig tape
- offering positive encouragement and praise, aligning this to the systems of rewards used in your setting
- sticking to a routine and keeping a record of when they wear it
- ensuring there are images of children with hearing technologies in books in the setting and toys wearing aids.

What should I do if I think the deaf child is not benefiting from their technology?

It is vital that hearing equipment is checked regularly and that any concerns are reported to parents, Teachers of the Deaf and audiologists quickly to minimise the time the child is without access to sound.

When a child appears reluctant to wear their hearing technology, it is important to investigate what it is about the aid or the environment that is preventing the child from making best use of their hearing technology.

Your observations will be very useful in alerting the audiologist to whether the hearing technology is set or programmed correctly for the child's needs. Regular observations will help you recognise any changes in the child's response to sound. Any change in response may indicate that the technology is not functioning at the correct setting and level.

It is also important to listen to the child and encourage them to report any problems they experience with their hearing technology to staff.

“Jayce was always happy to put on his cochlear implants in the morning at home. When I took him into pre-school to say goodbye he definitely had them on but by the time his key worker was involving him in an activity they were nowhere to be seen! Over several days his key worker watched us saying goodbye and it soon became clear that it was when Jayce went into the main pre-school room that he pulled them off. He told her that his friends were too noisy in there. For the following week Jayce was able to give them to her when he went in – instead of throwing them. He wore them later when he felt ready. His Teacher of the Deaf then worked with the staff to find ways to improve the acoustics in that room. He keeps them in now! ”

— Parent of a four-year-old

“Maya became upset and wanted her hearing aids off after story times when she first came to nursery. Her parents couldn’t understand as they said she likes stories so it was hard to know what was bothering her. After lots of observation I could see Maya had to concentrate really hard and if she wasn’t sure what the story was about she became bothered. Now I will tell her about the story before all the children hear it and we also have story time much earlier in the session. ”

— Key worker of a three-year-old

Creating a good listening environment

No technology can replace normal hearing and its effectiveness depends on the acoustic quality of the setting. The listening environment in a typical learning space, such as a hall or a classroom, can make it difficult for deaf children to make best use of their hearing technologies. This is demonstrated on the following link: www.ndcs.org.uk/simulation.

A good listening environment benefits all children. Deaf children in particular will experience difficulty in learning if:

- there is a lot of reverberation and echo in a room (i.e. poor acoustics). Rooms with hard surfaces (large uncovered/painted walls, glass windows and tiled wooden floors) and high ceilings allow sounds to ‘bounce around’. This distorts what is heard through the hearing technology worn by the deaf child
- there is a lot of background noise that drowns out the voice of any staff that are speaking. A good listening environment is where the signal-to-noise ratio is positive, i.e. the speech of the speaker is much louder than the background noise.

Background noise can drown out the speaker’s voice. Hearing adults can understand what is said even when the background noise is above that of a speaker. However, all young children require the speaker’s voice to be above the levels of background noise to understand what is said. Controlling background noise is therefore critical for children with a hearing impairment.



It's important to remember that the adult brain is much better at filtering out background noise in noisy conditions, for example, than a child's. In addition, the adult brain is very good at filling in the gaps of missed information – speech sounds or parts of words – that weren't heard. Deaf children are not able to do this – they lack the knowledge, vocabulary and context to be able to fill in the gaps. This means they can miss out on a lot of the new vocabulary and concepts being taught every day in an early years setting if there is not a good listening environment.

Adaptations that can be made to improve listening environments

The setting should liaise with the Teacher of the Deaf to ensure that any teaching spaces comply with best practice. All teaching and learning spaces should be regularly assessed and adaptations put in place to reduce reverberation and background noise.

Early years settings can help reduce reverberation by:

- fitting curtains, carpets or blinds
- installing specialist acoustic treatments to rooms (for example, acoustic tiles, panels and door seals)
- putting rubber tips or 'hush ups' on the bottom of chair and table legs
- using display drapes on walls
- covering hard surfaces with fabric
- padding the bottom of trays or pencil/pen pots with felt or foam.

Reducing background noise

You can reduce background noise in a setting by doing the following.

Managing the room	Managing the group
<p>Closing doors to noisy areas or corridors.</p> <p>Closing windows to outside noise, closing curtains and blinds if necessary.</p> <p>Positioning full bookshelves and cupboards against partition walls (to minimise noise transfer from other rooms).</p> <p>Ensuring heating and air conditioning systems operate within acceptable noise levels through regular maintenance.</p>	<p>Considering strategies to establish and maintain a quiet working atmosphere, such as good behaviour management.</p> <p>Encouraging children to develop an understanding of how noises such as chairs scraping, doors banging, dropping objects, shouting and so on can interfere with what their deaf peer can hear.</p> <p>Liaising with colleagues to manage noise effectively by, for example, avoiding a situation where a deaf child is in a group carrying out an activity when another group begins their music lesson.</p>



The National Deaf Children's Society has produced a range of resources, *Creating Good Listening Conditions for Learning in Education*, which helps to improve the attainment of all pupils and particularly those who are deaf. The resources include top tips to help make a setting into a better listening environment. Visit www.ndcs.org.uk/acoustics.

An effective setting will:

- promote effective communication strategies for all children
- promote peer awareness and understanding of the deaf child's needs
- be confident that any hearing technology is being used properly by a deaf child
- identify a staff member who can carry out listening checks and simple repairs to hearing technology
- consider adaptations to improve the listening environment, for example, by reducing background noise.

Teaching strategies

Deaf children cover the whole range of ability. They have the same potential to attain and achieve as any other child, given the right levels of support.

However, most teaching and learning takes place through the main senses of sight and hearing presenting deaf children with particular challenges which need to be addressed by the setting.

Deaf children are likely to need extra support to make the same progress as other pupils of a similar age and cognitive ability. Adaptations and strategies should be put in place to:

- manage and minimise the impact of their deafness on their learning
- develop their learning skills
- provide access to the curriculum
- lead to higher levels of academic achievement.

These strategies will benefit all children as well as any deaf children in your setting.

The Teacher of the Deaf will work with you to decide and plan necessary adaptations and measures that will best support the individual needs of the deaf child in your setting. As you get to know the child better you will become aware through their response and development which measures provide the best support. These are likely to include the following.

Use of visual aids

Visual aids ensure the child is not just relying on listening and lipreading for information. They are helpful in illustrating new concepts and vocabulary and providing a context for a new subject or situation. They also make use of visual memory which in deaf children may be more developed than their auditory memory. It is therefore helpful if:

- pictures, illustrations and objects are used to support what is being said
- spoken instructions are also made visual by using pictures or by demonstrating what is expected
- areas of the room, storage boxes and cupboards are given picture labels
- picture labels are used around the building, such as photos of other adults they may encounter, placed on the doors of the rooms they will normally be found in
- visual timetables are used that depict what will happen during the day in pictures or photos and are referred to regularly by members of staff
- routine activities are made as visual as possible to establish an

understanding of what is happening. For example, when taking the register get each child to stand or wave when their name is called.

Using photo diaries and experience books

A labelled pictorial record of what the child has been doing and learning:

- helps the child recall concepts and vocabulary
- provides a prompt for practising the language used
- provides a basis on which to extend language
- provides a means of informing parents, enabling further practice at home
- enables parents to record activities at home for the child to talk about in the early years setting.

Using routine and repetition

The use of routine allows the repetition of language and actions that help the child to learn how to use language. A regular sequence or pattern of events enables a deaf child to:

- predict and be ready for what is coming next when they find it difficult to pick up on incidental cues
- practise the same words or phrases in the same context over and over
- understand the context of what is being said so they can begin to link new words and ideas to what they already know
- follow a familiar pattern of events they recognise and so be independent.

Deaf children benefit from opportunities to repeat language patterns such as:

- learning action rhymes that use the same words with gradual additions
- sharing story books that have their own routine (i.e. the pictures are in sequence, flaps need lifting and simple phrases are repeated, which can be predicted and said aloud)
- games that require each child to follow the same pattern, where it is clear when it is your turn and what you are expected to do.

Additional adult support

Many deaf children will benefit from additional adult support that:

- provides a narrative to activities, just as a parent might at home, to support general language development
- prepares the child for an activity, for example, introduces new vocabulary
- repeats information and checks understanding after a learning activity.

If the child is being supported by a teaching assistant or a communication support worker, *Raising the Achievement of Pupils with a Hearing Impairment: Effective working with teaching assistants in schools*, produced by the National Sensory Impairment Partnership (NatSIP) in 2012 may help. The resource is available from the NatSIP website at www.natsip.org.uk or at www.ndcs.org.uk/professional_support/other_academic_and_professional_resources/education_resources.html.

Checking understanding

It is helpful to check regularly whether the child has understood what is said and what is required. You can do this by asking open-ended questions, as it prevents the child from simply nodding without really understanding. A deaf child may need more time to process the question and give an answer. Sometimes, if visual aids have been used to convey information, the child may wish to respond using visual aids. Your personal knowledge of the child may also give clues: some may fidget and become restless if they can't understand; others may remain passive.

Avoiding fatigue

Deaf children may become tired quicker than their hearing peers or appear to be more exhausted at the end of the day. Listening and concentration for lipreading requires extra energy and cognitive resources for a deaf child. To help the child you can:

- timetable activities that need the most concentration early in the session
- get to know which learning activities the deaf child finds most tiring and build in breaks or adapt activities to include tasks that do not solely rely on lipreading
- consider the pace of the activity
- avoid overloading the child with too many verbal instructions
- become familiar with individual signs of tiredness and fatigue so that you can intervene before the deaf child becomes frustrated.

Using learning technology

Many settings now use a range of educational apps or games to support children's learning. You should ensure that these are accessible to deaf children and do not rely on sounds that the child may not be able to hear. If the child has some hearing, they may benefit from using a direct audio input lead with their hearing technology.

If using an interactive whiteboard make sure the deaf child is sitting somewhere where they can see the screen clearly, but not close to or under the whiteboard projector.

When appropriate, use programmes or DVD/online clips that have been

subtitled or signed. For the child who is yet to learn to read, the presence of subtitles can be useful in establishing future use.

It is useful to use recordings of television programmes so that, as with DVD/online clips, you can stop them occasionally to check understanding or to give additional explanation. This will be particularly useful when a puppet or cartoon character is being used to present information.

Some children may benefit from watching the programme/DVD/online clip again later, either with a teaching assistant or at home.

Child-initiated activities or ‘free-flow play’

During free-flow play a deaf child may require support to access language and be aware of messages such as ‘tidy time soon’ warnings.

Outdoor play and physical activity

It is important to remember the range within which the deaf child can hear most effectively. To support participation it is helpful to:

- prepare the deaf child for what will be expected of them
- hold up visual signs as you give instructions
- engage a ‘hearing buddy’ who the deaf child can watch to see when an instruction has changed.

Preparing for an outing

It is important to prepare a deaf child for an outing so they can look forward to it like the other children. You can do this by:

- using pictures
- having objects related to the visit on the interest table with books explaining the topic
- using one-to-one time to explain any new vocabulary.

Reading books

When reading a book with a deaf child think about how you sit together. For instance, try and sit face to face or slightly sideways. You also need to be within touching distance so that you can touch them to get their attention from time to time. Like all children, they need time to look at pictures and to take in the information.

It is a good idea to look at books beforehand to see if the pictures alone can make sense. Some pictures may be a bit fuzzy or have too much detail, which makes it difficult for a child to follow the main character through the story. Use a lot of facial expressions and ask questions such as “What do you think will happen next?”

Story time

At story time think about the storybook that you will be using with the children. Do the pictures make sense of what the story is about? It might be a good idea to let a deaf child have a look at the book so they have some idea of the sequence of the story.

When telling a story:

- use different props and visual clues to help explain what is happening
- consider using sensory stories to support a child's learning. For example, if a character in a story is upset, use a drop of water down your or their face to indicate the character is crying
- use a lot of facial expressions to show the humour or the different moods of the characters
- if a child is learning sign language, use signs to go with the words in the story (it will be fun for other children to learn the new signs and reinforce their learning of new words too)
- encourage children to act out parts of the story
- include some deaf awareness (for example, some of the characters could be deaf, such as a deaf granddad who knew someone was at the door because of the flashing doorbell).

Music time

Music can encourage a child to listen to sound and they will benefit from repetitive rhymes and singing. Musical instruments can provide deaf children with valuable auditory experience of rhythmic patterns, tempo and pitch.

Take care when organising groups of children using musical instruments together. In the same way that many people speaking at once is unhelpful to deaf children, too many sounds at once may be overwhelming. Remember to give instructions clearly before music is played. Visual clues can help the child follow what is happening such as when to join in and when the music has stopped.

Group time

At group time try and remember the following points to make it easier for the deaf child to feel included.

- Get all of the children to sit in a circle so that everyone can see each other.
- When asking questions, make sure that a deaf child knows who is speaking. Repeat what was said if the deaf child did not catch it.
- Try to make sure that each child takes turns in talking so that a deaf child can try and lipread them one at a time.

- Be aware of the noise level. Play a game of putting your hand up or down so that children will know that they have to be quiet. It will be difficult for a deaf child to hear what is going on if too many children are talking at once. Apps are available that indicate if noise is exceeding a set level.
- Have some visual props ready to explain what the topic is.

Toys

New toys are being produced to show diversity, including, for example, dolls with hearing aids and cochlear implants. Toys like this may help deaf children to develop a positive identity as a deaf child.

An effective setting will:

- encourage staff to make adaptations and develop strategies to support the deaf child where necessary. These will benefit all children in the class. Strategies might include:
 - visual aids
 - photo diaries and experience books
 - checking the child's understanding
- ensure any videos/DVDs/online content is accessible to deaf children
- give the child opportunities to rest if they are experiencing fatigue
- ensure that any group learning is inclusive
- ensure that all teaching staff have high expectations for deaf children in their setting.

Supporting language development

The development of language skills is critical to the social, emotional and intellectual development of any child.

For young children to gain language they have to have regular exposure to it. Deaf children will need support to access language, ensuring that it is built into their day:

- by using language alongside every activity
- through regular conversation.

It is important to respond quickly to any delays in language development because of the potential detrimental impact this can have in all areas of learning. If language development continues to be slow the deaf child should be assessed to ensure no other difficulties exist.

When there is a specific language difficulty, a period of targeted support may be required to enable language development, which can be delivered by the Teacher of the Deaf, speech and language therapist or you through an agreed additional language programme.

Where deaf children communicate in sign language, you may need to draw on additional specialist support to ensure that the setting is a rich language environment for the child. This may involve, for example, having a communication support worker in the setting to support the child directly. A Teacher of the Deaf can provide advice on how best to do this.

Many deaf children develop good speech and language skills. However, keeping up with their hearing peers as the demands of an early years setting and the curriculum start to have an impact can be challenging for some deaf children. Deaf children will therefore need support to:

- broaden their vocabulary to acquire a range of alternative words for the same object, feature, feeling, place, etc.
- learn words used in specific topics or curriculum areas
- understand idioms or colloquialisms
- hear and understand everything that is said.

The table below sets out some difficulties experienced by deaf children and what can be done to address them.

The deaf child may have difficulty in:	Activities that would help the child
Knowing or choosing the right word.	<p>Use pictures and objects to help establish and introduce vocabulary.</p> <p>Provide naturally occurring opportunities for the child to repeat words and practise them in different contexts.</p> <p>Build up vocabulary by linking new words to ones they already know.</p> <p>If you know new vocabulary will be required, introduce the deaf child to the important words before the teaching session is introduced so they are ready to use and hear them in context.</p>
Joining words together in sentences.	<p>Provide the child with as much experience of language alongside the activity as possible, modelling how words link to what we do.</p> <p>Re-model the child's speech back to them, demonstrating how to say a word or sentence by continuing a conversation.</p> <p>Use experience books and photo diaries to prompt links between the words they know and the experiences they have had.</p>
Understanding or making sense of what is said.	<p>Check that your communication is clear.</p> <p>Start with simple language relating to what they are doing, pictures or objects.</p> <p>Use short sentences or chunks of language that are supported with pictures or objects.</p> <p>Start with what they have said and expand on it. Repeat when necessary.</p> <p>Avoid using words they haven't met yet.</p> <p>Teach the use of clarification strategies so they can let you know if they haven't understood.</p>

Listening skills, attention and concentration

Much of learning is based on listening. Some deaf children will take time to learn and develop auditory attention skills and will need more support than their peers, especially when the group size increases and the environment is busier, noisier and more distracting.

Ensuring that the child's hearing technology is working properly and that there is a good listening environment, as set out in **Making it easier for deaf children to communicate and listen**, will be needed to support good listening skills.

The following areas should be worked on so that deaf children can learn and develop in accordance with their individual needs.

Expectations

Gradually extend your expectations and increase listening demands. Be selective about the amount of listening you can expect and the circumstances in which it will work best. Some listening activities will be best one to one. Small group listening can begin to lay down the rules of group listening.

It is helpful to indicate the amount of time you want the deaf child to listen for by using a sand timer.

Modelling good listening

Indicate clearly how to attend and listen. Praise and reward those children who are able to sit still, look at the person who's talking and take their turn. Encourage children to ask if they haven't heard or understood something and avoid asking questions that can be answered with a "yes" or "no" as the child may 'pretend' to understand. For example, ask questions like "What did you like about the story?" instead of "Did you like the story?"

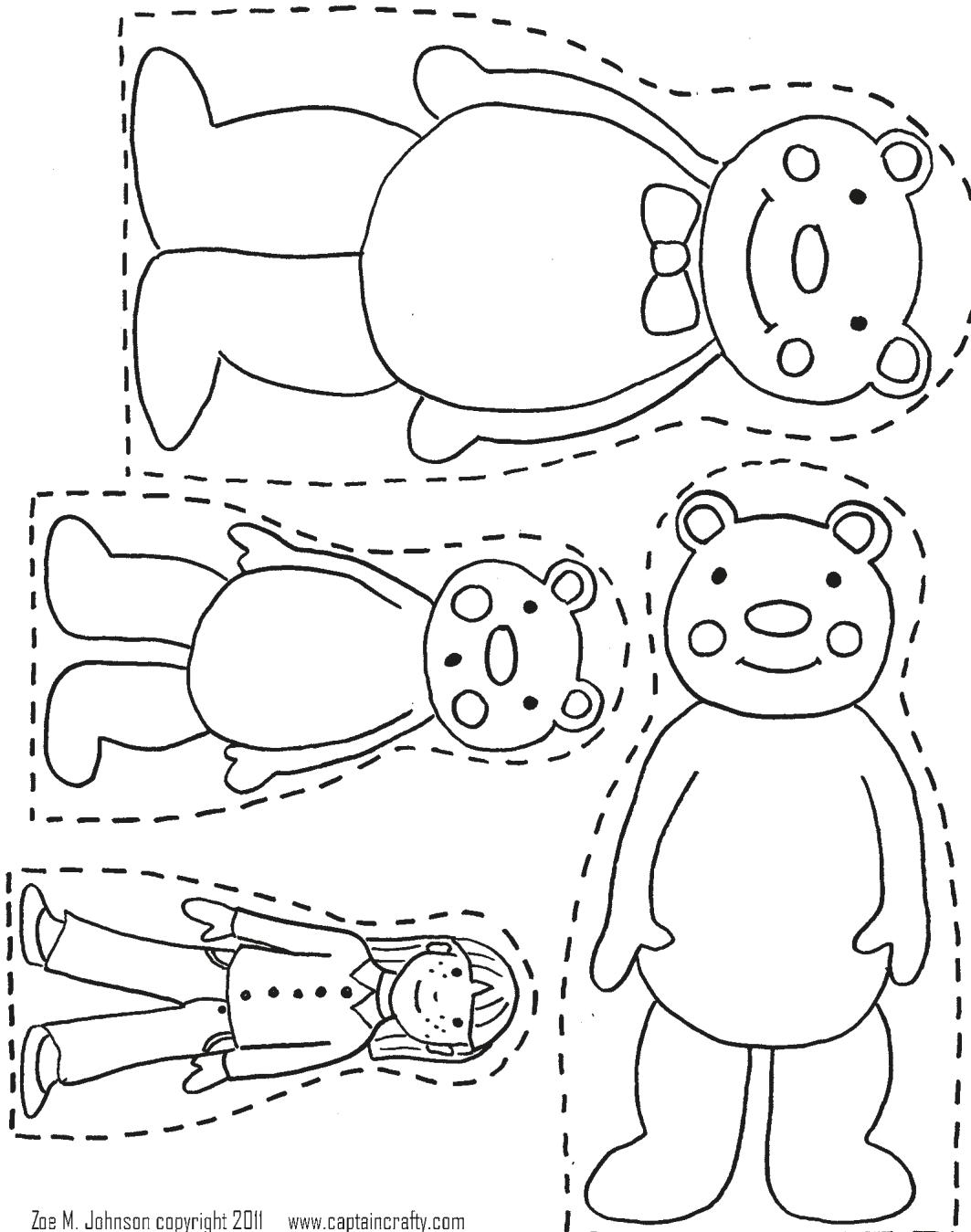
Gaining and maintaining attention

Always gain the deaf child's attention before you expect them to listen. Give the child a specific focus to listen out for, for example, stories with a repeating phrase that they can join in with will hold attention.

Give the child a prop to participate with at a particular point in a story or rhyme.

Listening prompts

These could be used in a pre-tutoring activity and then cut out and held while a story is being told. The following resource, for example, could be used for the story of *Goldilocks and the Three Bears*.



Zoe M. Johnson copyright 2011 www.captaincrafty.com

Listening alongside looking

Support the deaf child's understanding with visual aids, but remember that some deaf children may find it very difficult to look and listen. It is harder for a deaf child to integrate their attention and they need practice. Give them time to look at a picture or object then look back to you as you speak.

Use familiar stories – it is easier to look at pictures and listen when you know what is coming up.

Play listening games

Staff can play an important role in establishing good listening habits and there are a large number of activities and resources available which can promote listening skills in the very young.

These include the following.

Barrier games

- Choose the right sound: match musical instruments to their sound.
- Musical statues – respond when the sound stops.
- Waiting games in response to a voice: “Ready, steady... GO!”
- Games with instructions like ‘Simon Says’.
- Games with rules that require careful listening because nobody wants to miss their turn or lose the game if they don’t follow the instruction properly.
- Picture card games or board games that use repetitive rules and a visual focus so that the deaf child can begin to overhear without having to look up.

Listening walks

Walk around inside or outside your setting to focus attention, pausing and stopping from time to time to allow the child to focus on listening in that area.

Focus on sounds that will be familiar to other children but which the deaf child would need practice to pick out.

You could make sound maps of the setting and record familiar sounds associated with parts of the site (toilet flushing, doorbell ringing, children playing).

Fatigue

Remember it is particularly tiring for deaf children to listen; they have to work hard at watching faces and listening out for signs and sound. Listening tasks may need to be shorter than those for their peers.

Talking

Some deaf children may prefer to use sign language or require their language to be supported with signing or cued speech. Other children will have full access to speech sound and will be able to develop speech intelligibility alongside their peers. They will however benefit from extra support to learn the subtleties of spoken language and gain confidence in their own vocalisation. Support may include the following.

Rhymes, poems and stories

Including these in every session will help children to learn about the rhythmic nature of speech and allow them opportunities for repetitive practice of voice control.

Singing and music

Opportunities to sing can provide deaf children with a fun way to practise controlling their voices, both in terms of pitch and frequency, and in recognising the melody of intonation in spoken language.

Role play

In role play sessions encourage children to control their voices by making them sound different. Become a character that has a deep voice. Try out different voices: happy, sad, friendly, cross.

Toys to encourage talking

These might include telephones that need answering, echo microphones and puppets.

Never attempt to correct speech patterns without the guidance of a speech and language therapist. If you are concerned about the speech of a deaf child share your concerns with the Teacher of the Deaf as soon as possible so the child can be appropriately assessed without delay.

Auditory memory

In order to build up the amount of spoken language they can take in at any one time, children have to expand the size of their auditory memory. For language to really get going the deaf child has to store words and phrases alongside their experiences so they can make links between words and their meanings and use them again appropriately.

Memory for words comes gradually as language develops, but deaf children typically need support to expand their memory for what they have heard. A deaf child will particularly benefit from:

- simple rhymes and songs
- stories that repeat words or phrases
- making use of their visual memories using photos, pictures and objects to prompt recall
- playing memory games, i.e. 'I went to the shop and bought...'.

An effective setting will:

- understand the impact that deafness can have on language development
- be able to support language development using a range of different activities and games
- promote listening skills as necessary.

Supporting social and emotional development

Feeling included and that they are a valued member of the group can improve a child's self-esteem, confidence and emotional well-being. However, the communication difficulties associated with deafness can affect how a pupil is able to integrate socially because:

- it is difficult to talk in groups, partly because of deafness
- many opportunities to socialise take place in the noisy areas where deaf children are more likely to mishear
- social acceptance requires an understanding of social norms but hearing children acquire these by incidental learning experiences, which deaf children are less likely to have. Deaf children may need specific teaching to understand situations from other people's perspective.

Good practice in supporting social and emotional development

Your setting should take steps to:

- facilitate effective communication between the deaf child and their peers
- help the other children to understand what difficulties the deaf child faces and what they can do to make them feel included
- ‘teach’ the deaf child about aspects of social interaction, such as modelling appropriate behaviours, praising interaction and playing games that require turn-taking and cooperation
- review the necessity and most appropriate level of adult support so that the deaf child does not become unnecessarily dependent on that person for social support. Ensure that staff work to encourage greater independence for the child
- boost the deaf child’s confidence by praising them when they contribute to group activities and particularly when they have made their own friendships.

Promoting a positive self-image

Deaf children may gradually come to understand that they are deaf and how this impacts on their life. They may also have difficulties acquiring the language that helps them express and manage their feelings. Feeling different and isolated will impact on learning but, crucially, can lead to a lack of confidence and low self-esteem that can have a detrimental impact as life goes on.

Remember other children in your setting may need time out, make mistakes, mishear or misunderstand things too. Deaf children may find it supportive to know they have similar experiences and that they are not the only children in the setting who may need support.

In the same way that the materials you work with – including books and toys – should represent the wide variety of people found in our school communities, deafness should be included too.

The Teacher of the Deaf will be able to provide advice in circumstances when the deaf child is particularly unhappy or anxious and measures implemented have not helped. Always share concerns with the parents and look at engaging the help of external agencies if a child needs a personal development programme.

Independence and self-advocacy

The deaf child, like other children, will benefit from developing independence skills so they are ready for the outside world and can also manage their deafness.

- Constantly review and monitor the appropriateness of adult intervention in all activities, carefully extending expectations depending on the task.
- Create meaningful opportunities to develop a child's independence, for example, ask them to choose an activity and how they would like to be supported.
- Check that the deaf child has understood information or instructions so they can then carry out activities independently.

A deaf child may benefit from learning strategies that will help them cope with situations they may find difficult because of the impact of their deafness, for example, even the youngest child can be helped to learn to ask a peer to face them when they speak. Encourage them to practise strategies that they can use to improve circumstances for themselves.

Establishing behaviour boundaries

In theory, there should be no difference between disciplinary approaches used for deaf children and other children. Do not let the deaf child get away with things you would not let other children do. However, in relation to deaf children, indiscipline may be an indicator that some specific support is required, for example, communication difficulties may mean the deaf child has difficulties expressing themselves or understanding rules.

- Be sure the deaf child has understood the rules of the setting and how all their peers are expected to follow these too.
- Find the reason behind the behaviour. Be aware that it may be down to the frustration that can occur through not being able to hear and understand what is going on in the class, or the fatigue that comes with the intense concentration required to be able to listen.

- Become familiar with the deaf child's usual behaviour to establish when indiscipline is part of their behaviour patterns or when it may be an indicator of additional underlying causes or an expression of unmet need.
- Ensure the deaf child understands why they have been disciplined. Deaf children may lag behind other children in the understanding of emotions and the mental states of others. It is therefore important that very young children begin to understand the underlying reasons for discipline and the impact of indiscipline on others.

An effective setting will:

- understand how deafness can impact on deaf children's social and emotional development and their behaviour
- take steps to promote the social and emotional development of the child
- encourage deaf children to be independent and feel positive about their deafness
- encourage staff to know how to support good communication between hearing and deaf children
- apply clear behaviour boundaries that take into account the needs of deaf children.

Assessment

National governments in the UK emphasise the importance of ongoing assessment as an integral part of learning and development. This informs the setting of future learning outcomes and the planning of learning programmes. For deaf children it will also inform where additional support is required, including the need for specialist advice and guidance.

Assessments should consider and be looked at with reference to the relevant curriculum for the child:

- Early Years Foundation Stage in England
- Foundation Phase in Wales
- Foundation Stage in Northern Ireland
- Curriculum for Excellence, Early level in Scotland.

As with other children, assessment and monitoring procedures for deaf children are most effective when used:

- regularly
- to track the child's progress over time
- to identify when there is a delay in progress that needs to be addressed
- to identify and address difference in progress between the individual child and others of a similar ability and age
- to inform planning of future learning outcomes
- to evaluate the effectiveness of teaching and learning strategies.

When assessing a deaf child it is important to bear in mind that it is possible to under or overestimate a child's performance. For instance, good speech intelligibility may mask levels of language understanding such as not recognising a word they do not commonly use or misunderstanding vocabulary they know when it is used in a different context. It is also possible to underestimate the ability of a deaf child who may misunderstand the question or task and be unable to complete it correctly, or their correct response may be misunderstood and not given its true worth.

It should also be noted that some standardised tests may not be accessible to deaf children. It is important that the child fully understands what is involved in taking the test and what they need to do. The Teacher of the Deaf or educational psychologist can advise on the appropriateness of the test and possible alternatives that can give the deaf child the opportunity to demonstrate their knowledge and ability.

It may also be necessary to supplement assessment against national benchmarks with other additional measures. This could include observation by

the Teacher of the Deaf and a particular focus on language and communication development.

Assessment of need

Assessment of a deaf child should be informed by an understanding of the impact that the deafness has on their learning. The Teacher of the Deaf will further assess and monitor progress made by the deaf child in specialist areas of need, such as communication, language and audition, to:

- help to set realistic learning outcomes
- analyse progress made against national performance indicators
- identify what support and strategies are needed to enable the child to make progress in specified areas
- evaluate the effectiveness of additional support and tailored intervention on learning outcomes.

Parents can make a valuable contribution in accurately assessing the needs of their child. They can alert you to any worries their child may have about keeping up with their peers or if they are not able to apply their learning to life outside the setting. It is beneficial to establish a regular means of communication with parents as part of monitoring progress (see page 52).

The formal testing that the Teacher of the Deaf may carry out to assess the progress of a deaf child will only look at one part of their development. It is important that this is informed by ongoing recording and observation by early years staff to obtain a comprehensive picture of the deaf child's development.

Assessment should help identify the additional support the child needs to achieve a learning goal. This support may be provided by early years staff with advice from specialists or by specialists themselves, depending on the needs of the child. The success of this intervention on the child's progress will be measured to inform future support.

With increased understanding of deafness and improved hearing technologies it has become easier for staff to identify when additional needs outside of deafness are hindering progress and attainment. This is an area that needs careful monitoring and regular discussion, between the key worker, early years staff and Teacher of the Deaf, to ensure that the additional needs that a deaf child may experience are not disguised by their deafness.

Effective learning outcomes are:

- achievable, based on previous assessment, but appropriately challenging
- informed by a clear understanding and assessment of need
- clear and set within a defined timescale

- supported by appropriate teaching strategies or specific intervention programmes.

Expectations

With effective assessment, support and monitoring the deaf pupil has the potential to:

- make the same progress as children of a similar ability and have age-related learning outcomes within standard curriculum frameworks
- have expectations made of them that should be as high as those for children of similar age and ability.

Small-step assessments should be used to assess and monitor progress where the deaf child has very significant additional cognition and learning needs. Their progress should also be the same as hearing pupils of the same cognitive ability.

The National Deaf Children's Society, in collaboration with The Ear Foundation and with support from the National Sensory Impairment Partnership (NatSIP) has produced a new online resource to support professionals in assessing and monitoring the progress of deaf children in communication, language, listening, literacy, numeracy, cognitive development and social/emotional development.

It also includes guidance on issues to consider when carrying out assessments as well as examples of assessments in practice.

The resource is aimed at Teachers of the Deaf and other professionals working with deaf children and young people. However, it may also be of interest to other professionals who would like more information on the assessments being carried out with a deaf child. The resource and an accompanying short video are available to download from www.ndcs.org.uk/assessments.

An effective setting will:

- use specialist assessment findings to ensure there is a full understanding of the deaf child's learning needs and to support target setting, with support from a Teacher of the Deaf
- use the results of these assessments to review the deaf child's learning and teaching strategies.

The above will be in addition to normal and ongoing assessment, monitoring and tracking of the child's progress.

Partnership with parents

Parents will play a crucial role in their deaf child's education. They should be able to provide you with important information on their child's needs and abilities and pass on advice given to them by specialists such as audiologists and Teachers of the Deaf.

To help ensure effective partnership working with parents it is important to:

- make them feel welcomed, valued and supported, enabling them to participate in regular, structured conversations about their child's progress
- let them know who they need to talk to if they have any concerns or want information about their child's needs or progress
- involve them in planning, informing and supporting their child's individual learning programme or planning the provision made for their child
- provide regular up-to-date and accessible information about:
 - their child's progress, their planned learning outcomes and the measures being taken to address any difficulties their child may be experiencing in making progress
 - their child's level of participation, including the development of social skills and friendships
 - the topics their child will be following and how they might help at home to prepare their child for this.

Contact prior to starting at the setting

Discussion with parents prior to the child's admission will enable staff to obtain important information about the child's needs so that measures can be put in place to ensure the child settles in well at the setting. It gives the setting an opportunity to respond to any worries parents may have about their child starting, helping them to feel valued, welcomed and involved in their child's education.

Helping parents support their deaf child's learning

Many parents will want to support their child's learning and you can help by:

- explaining to them the nature and purpose of learning activities in your setting
- sharing any particular challenges their child has and ways that may help the child overcome them
- suggesting ways parents can supplement your work in developing their child's language, communication, literacy and numeracy skills
- asking parents to reinforce new concepts and vocabulary, suggesting ways of doing this
- suggesting how they can use outings and games to support their child's learning and teaching in your setting
- reminding them that learning can be stress free and enjoyable and not to put excessive pressure on their child.

The National Deaf Children's Society has produced a range of resources to support parents in developing literacy and numeracy skills.

- *Helping Your Deaf Child to Develop Language, Read and Write 3–4 years old*
- *Helping Your Deaf Child to Develop Early Maths Skills 3–4 years old*

These are available from our website at: www.ndcs.org.uk/family_support/education_for_deaf_children/education_during_school_years/developing_reading.html

www.ndcs.org.uk/family_support/education_for_deaf_children/education_in_the_early_years/developing_maths.html

Establishing good communication between the home and the setting

The communication of everyday information between the setting and home can be particularly difficult for deaf children who may totally miss or misunderstand verbal information or instructions. To help, the setting can:

- make use of a home-setting notebook that is always kept in the child's school bag to provide an important link between staff in the early years setting and the parent
- establish a regular means for staff to update parents by email, text, meeting or phone
- use technology such as tablets and portable devices to ensure effective contact.

An effective setting will:

- establish and maintain a way to communicate effectively with parents
- work closely with parents to enable the setting to better understand the child's needs
- keep parents informed of strategies to support the child's educational and social development, and let them know how they can help.

Quality improvement

Many settings will already have systems for monitoring the quality of provision including using data to track child's progress and assess how well interventions and support strategies for children with additional needs are working. An important aspect of this is assessing the effectiveness of support provided through observation.

This checklist will help managers assess the extent to which deaf children are supported effectively within the early years setting.

Quality improvement checklist for managers

Staff in the early years setting	Observations and recommendations
<ul style="list-style-type: none"> • Are staff aware of the child's level of deafness and implications for accessing learning? • Have staff checked with the child that their hearing technology is being worn, is switched on and is functioning? • Do staff know how to use a radio aid if a child requires one? • Have staff taken steps to minimise background noise? • Are staff working effectively to support the child's language development, recognising the barriers that deaf children may face in this area? • Are staff using multisensory approaches (for example, visual clues) and teaching strategies to help the child access any teaching and learning? • Is there clear communication in place within the setting? For example, are staff using clear speech patterns and standing or sitting in a position where the child can see her/his face? • Where the child needs sign support to access what is being said, is this being provided at a level that the child can fully understand by someone with relevant advanced qualifications in sign language? 	

Observed behaviour in the child	Observations and recommendations
<p>Is the child:</p> <ul style="list-style-type: none"> • able to follow any learning activities? • engaged and active in learning? • able to work, play and learn independently without over-reliance on support staff? • indicating if their hearing technology is not working? • able to interact/communicate with adults and ask questions? • able to interact/communicate with other children? • well behaved? 	

This checklist is based on a pro forma designed by Helen Bate from Derbyshire local authority.

Standards for specialist hearing support services

Specialist hearing support services should be operating to service standards set out by the Department for Education in *Quality Standards for Special Educational Needs (SEN) Support and Outreach Services*, available at www.education.gov.uk/publications/standard/publicationDetail/Page1/DCSF-00582-2008.

Specialist hearing support services should also be benchmarking their performance by measuring the outcomes of the deaf children they support. This can be done by using the National Sensory Impairment Partnership (NatSIP) Quality Improvement Pack, available online at www.natsip.org.uk/index.php/524-qilaunch.

An effective setting will:

- support quality improvement to ensure that education provision for deaf children is of high quality.

Starting primary school

Challenges for deaf children

Starting school can be daunting for any child. For deaf children there are extra challenges that they may encounter.

- New learning environments with varying quality in listening conditions.
- New teaching staff to work with, with varying teaching styles, expectations and ease of communication/lipreading.
- Varying deaf awareness levels among staff and children.
- More demanding subject content.
- A lot of new vocabulary, particularly specialist subject vocabulary.
- Making new friendships.
- Differing expectations of behaviour and independence.

It is important for the early years setting, the primary school SENCO and the teacher to work with parents, the child and Teacher of the Deaf to develop a transition plan that helps overcome these potential challenges and ensure a successful start.

The transition plan

A good transition plan will:

- be prepared well in advance of the child starting to give time for the support arrangements to be put in place
- clearly identify the member of staff responsible for preparing the plan and coordinating its implementation
- involve the child and their parents and address any concerns they have
- be based on a thorough analysis of the child's needs and strengths including information from specialist assessments where necessary (a checklist for collecting relevant information follows)
- set out what needs to be done to meet the child's needs including:
 - what should be provided (for example, equipment, teaching assistant support, staff training, further assessment, improvements in classroom acoustics, opportunities to visit the school, specialist support)
 - who in the school is responsible for each identified action
 - timescale for delivery.

...❖ Example checklist for collecting information to support the transfer from the early years setting to primary school

Transfer to primary school Information to support a successful transition	
Hearing and personal hearing technology	
Information required	Implications for transition plan
In this section record: Degree and nature of deafness: Un-aided hearing level: Aided hearing level: Ability to discriminate speech in different environments (for example, class, halls): Sounds/words that are difficult to hear: Personal hearing technology used:	In this section record: What needs to be done to improve access to sound, for example, providing radio aids, improving acoustics, using soundfield systems? What needs to be done to ensure optimum use of hearing technologies, for example, daily checks by staff of battery, tubing, etc., developing the child's skills in managing their own technology? What are the health and safety implications, for example, fire drills?

Communication	
Information required	Implications for transition plan
<p>In this section record:</p> <p>Preferred way of communicating in different locations and situations (class, home, friends):</p> <p>Competence in preferred way of communicating:</p> <p>Lipreading ability:</p>	<p>In this section record:</p> <p>What needs to be done in class to support access to teaching and learning including, for example:</p> <ul style="list-style-type: none"> • seating position to allow for lipreading • using radio aids • ensuring good acoustics • using soundfield systems • advice/training for the teachers • providing communication support workers with Level 3 qualification for children who use BSL? <p>What needs to be done to promote communication and social interaction with other children?</p>
Language	
Information required	Implications for transition plan
<p>In this section record:</p> <p>Levels of understanding of language:</p> <p>Level of expressive language:</p> <p>Vocabulary level:</p> <p>Grammatical constructions:</p> <p>Social interaction and use of language:</p>	<p>In this section record:</p> <p>How does this compare with hearing children?</p> <p>What are the implications for learning, for example, more processing time?</p> <p>If a gap exists, what targets should be set to close the gap and what support/ interventions are required to achieve them?</p> <p>What are the implications for teaching?</p>

Cognition	
Information required	Implications for transition plan
<p>In this section record:</p> <p>Non-verbal cognitive skills to:</p> <ul style="list-style-type: none"> a) ensure teachers have high expectations b) check whether or not there are other underlying learning difficulties. 	<p>In this section record:</p> <p>What needs to be done to address any other underlying difficulties the child may be experiencing?</p>
Progress in curricular areas	
Information required	Implications for transition plan
<p>In this section record:</p> <p>Progress in different curricular and extracurricular areas. Are there particular strengths? Are there particular difficulties?</p>	<p>In this section record:</p> <p>Is more support required in particular areas? What targets need to be set?</p>
Social and emotional aspects	
Information required	Implications for transition plan
<p>In this section record:</p> <p>Level of social interaction in class/school friendship groups:</p>	<p>In this section record:</p> <p>If levels are low how can they be increased? Do other children need deaf awareness training and information on how to communicate?</p>

Parents' views	
Information required	Implications for transition plan
<p>In this section record:</p> <p>What are the parents' hopes, aspirations and concerns about their child moving to a new school?</p> <p>What information and help do they think they need to support their child's move to a new school?</p>	<p>In this section record:</p> <p>What information and opportunities are needed to help with the transition?</p>
Other considerations	
Information required	Implications for transition plan
<p>In this section record:</p> <p>Any other considerations, for example:</p> <ul style="list-style-type: none"> • any other difficulties, medical conditions or medication needs • attendance issues • behaviour issues. 	

Strategies that could be included in the transition process and plan

Assessing the child's needs

- Arrangements for assessing the child's needs including information from the early years setting, supporting specialist services in health, education and social care, parents and the child.

Information for the child

- Familiarisation/taster days with parents and possibly extra days to meet and get to know key staff members. These visits should be planned to enable the child to take full part in the activities.
- Accessible information about the school, such as a map, a timetable, photos of relevant staff, information about breaks and lunchtimes and information on who can help with any concerns.

Liaison between early years setting and primary school

- Regular transition meetings and ongoing liaison between key members of staff from both setting and school and the support service.
- Early years staff and the Teacher of the Deaf provide information about the child's deafness, its impact and their needs.
- Primary school staff visit and observe the child at early years setting.

Preparation in the primary school

- An acoustic audit of teaching spaces that identifies measures required to improve the listening environment.
- Ensuring that any hearing technology such as radio aids and/or a soundfield system is in place in good time.
- Arrangements for deaf awareness training for other children.
- Arrangements for providing primary school staff with information on the child's needs and how they are best supported in accessing teaching and learning.
- Arrangements for training and advising relevant staff – this could include deaf awareness training for staff including lunchtime supervisors.
- Arrangements for meeting social needs including continuity of existing friendship groups.
- Arrangements for having the teaching assistant support/communication support worker in place for the start of term, if appropriate.

An effective setting will:

- recognise the additional challenges that deaf children may face in starting formal education
- make sure that it provides all the necessary information to the primary school well in advance of the transition.

Appendix 1: Types and levels of deafness

Conductive deafness and glue ear

Conductive deafness occurs when sound cannot pass through the outer and middle ear to reach the cochlea and auditory nerve in the inner ear. The most common cause during childhood is a temporary build-up of fluid in the middle ear known as ‘glue ear’.

Up to 80% of children will experience an episode of glue ear by the time they are aged 10. It is estimated that one in five of four-year-olds will be affected by glue ear at any one time. Teachers, particularly those teaching the youngest children, will have a number of children in their class who are experiencing difficulty in hearing.

For some children glue ear can reduce hearing considerably for a protracted period and this has a significant impact on learning and progress.

Sensori-neural deafness

Sensori-neural deafness results from damage to the inner ear. It is generally caused through loss or damage to the hair cells in the cochlea that means the cochlea is not processing sound effectively or, in some cases, when the auditory (hearing) nerve itself is not working.

Children can have both conductive deafness and sensori-neural deafness and this is known as mixed deafness.

Congenital and acquired deafness

Congenital deafness refers to children who are born deaf. Other children acquire deafness due to illness, accident or a late onset genetic condition.

Levels of hearing loss

Deafness is measured in two ways:

- how **loud** the sound has to be so that the child can hear it, measured in **decibels**
- which **frequencies** (pitch) the child can or cannot hear, measured in **hertz**.

Each child’s deafness is different depending on which frequencies are affected and how loud a sound has to be before they can hear.

Few children are totally deaf. Most children can hear some sounds at certain pitches and volumes, known as their ‘residual hearing’. There are different degrees of deafness classified as follows.

Mild hearing loss

Although for many young people mild loss does not require audiological interventions such as hearing aids, in terms of education it can mean a significant loss.

- Children can usually hear everything that is said to them in a quiet room, but not if there is background noise or if they are far away from the speaker.
- A child would not be able to follow a whispered conversation.
- Some children with a mild hearing loss will use hearing aids.

Moderate hearing loss

- Most children with a moderate hearing loss will use hearing aids.
- Without hearing aids a child is likely to be able to hear most of what someone says to them within a quiet room as long as they speak clearly.
- With hearing aids they are likely to be able to follow a conversation within a quiet room.
- They will find it extremely difficult to follow a conversation in a large group, if there is background noise or they are far away from the speaker.

Severe hearing loss

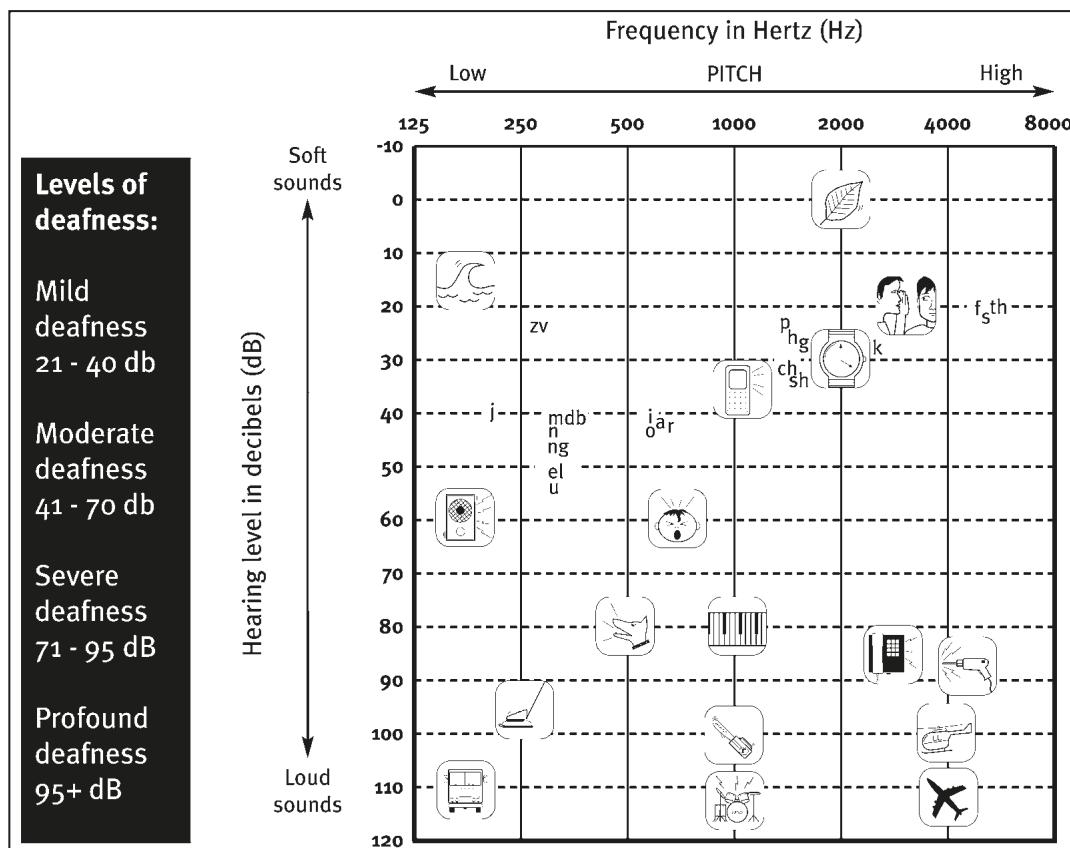
- A child will be unable to access conversation at normal levels without hearing aids or a cochlear implant but may be able to hear loud sounds such as a dog barking or a drum.
- With hearing aids or a cochlear implant most children will be able to follow a conversation within a quiet room provided that the speaker is within two to three metres of them.
- A child is likely to require additional communication support, for example, sign support or lipreading, to understand speech in the presence of any background noise or within a group conversation.
- In the presence of background noise the child may find it extremely difficult to understand speech even with communication support.

Profound hearing loss

- The majority of profoundly deaf children will use a cochlear implant or hearing aids.
- Without a cochlear implant or hearing aids a child will not be able to hear speech or other sounds. They may be able to feel very loud sounds such as a lorry passing them in the street.
- Without a cochlear implant or hearing aids the child is likely to use sign based language to communicate directly with another person.
- With cochlear implants or hearing aids the child may require additional communication support (for example through sign language or cued speech) to access speech, especially within background noise or within a group conversation.
- In the presence of background noise the child will find it more difficult to understand speech.

Some children may have a malformation of the inner ear – an absence or malformation of the cochlea or auditory nerve. This will mean they will have no direct access to sound at all. In these situations hearing aids or cochlear implants would offer no benefit. They will, therefore, likely use sign language as their main means of communication.

Visual representation of the loudness and pitch of a range of everyday sounds



This diagram is based on the British Society of Audiology definitions of hearing loss.

The Teacher of the Deaf will be able to explain the individual deaf child's level of hearing by using an **audiogram**, similar to the one above. An audiogram is a chart used by an audiologist to record the results of the hearing assessment and is a visual representation of the child's hearing.

Unilateral deafness

- There may be little or no hearing in one ear, but ordinary levels of hearing in the other.
- The child will be unable to localise sound, follow group conversations and find it difficult to understand speech in the presence of background noise.

Auditory neuropathy spectrum disorder

Auditory neuropathy spectrum disorder occurs when there are faults which affect how sound is transmitted along parts of the auditory nervous system. It affects the brain's ability to process all sound including speech. Children will experience fluctuating hearing levels and often find it difficult to access speech, especially in the presence of background noise. Some children with auditory neuropathy spectrum disorder will use hearing aids or cochlear implants; others will not find them beneficial and will therefore not use them.

Deaf culture

About 10% of deaf children have deaf parents. These families often use British Sign Language (BSL)⁴ as the first language of the home. Other families may also choose to use BSL as a first language with their family members. These families consider deafness as a culture rather than a disability. Within their community they are able to communicate and function effectively with each other. They describe themselves as 'Deaf' with a capital D. British Sign Language is the language of the Deaf community.

3. Where the deaf pupil lives in Northern Ireland, Irish Sign Language may be used.

Appendix 2: Hearing technology

It is likely that any deaf children you work with will rely on various hearing technologies. The following is an overview of the types of technology you may come across, how they work and what limitations they have. It is important to note that hearing technologies do not replace normal hearing.

Hearing aids

A hearing aid amplifies sound and is worn in or behind the ear. It has three basic parts: a microphone, amplifier, and speaker. Modern digital hearing aids can be programmed very closely to match the wearer's hearing loss and provide a radically different listening experience compared with those of the past for deaf people.

Hearing aids are designed to maximise the hearing the wearer has (known as their residual hearing). If the child has no measurable hearing at all at certain frequencies, especially the higher frequencies such as 'ss' and 'th' then a hearing aid will not improve this.

For more information on hearing aids see the National Deaf Children's Society's resource *Hearing Aids: Information for families*.





Cochlear implants

This is a surgically implanted hearing device that can provide access to spoken language for many profoundly deaf people. A profound hearing loss occurs when there is significant damage to either the cochlear hair cells, which are the mechanism by which sound waves are converted into electrical impulses that the brain can then interpret, or to the auditory nerve itself. A cochlear implant works by stimulating the auditory nerve directly so bypassing damage to the cochlea. If an implant is fully functional then it can provide the user with access to sounds across the full range of speech frequencies. For many users this gives them access to speech in good listening conditions.

For more information on cochlear implants see the National Deaf Children's Society's resource *Cochlear Implants: Information for families* or go to www.soundingboard.earfoundation.org.uk.



Bone conduction hearing implants

Children who have conductive hearing loss and have problems wearing behind-the-ear hearing aids may benefit from bone conduction hearing aids. Bone conduction hearing aids use a vibrating pad that allows sound to be conducted through the bone rather than through the middle ear. They are worn on a headband with the vibrator behind the ear, resting on the mastoid bone (part of the skull behind the ear).

Children who have a permanent conductive deafness and find a bone conduction hearing aid effective may also be suitable for a bone conduction hearing implant. A bone conduction hearing implant is designed for people who have a functioning cochlea but the middle or outer part of the ear prevents the information reaching the cochlea in the usual way. It consists of a sound processor that is held on the head behind the ear. This might be clipped to a fixture, known as an 'abutment', a small titanium screw that has been implanted in the skull just behind the ear (known as a bone-anchored hearing aid) or with a magnet holding the processor in place. This allows sound to be conducted through the bone rather than through

the ear canal and middle ear. This allows sound waves to be transmitted directly to the cochlea in the inner ear.

However, the surgery for bone conduction hearing implants cannot usually be done until the age of four years. Young children may use the sound processor attached to a soft headband. In this case, the soft headband can be taken on and off like other bone conduction hearing aids.

For further information read the National Deaf Children's Society's resource *Bone-Anchored Hearing Aids: Information for parents and families*.



Radio aids

A radio aid carries the teacher's voice directly to the child's receiver attached to their hearing aid, bone conduction hearing implant or cochlear implant. It reduces some of the problems presented by distance from the teacher and background noise. The microphone and transmitter are worn by the teacher and the receiver is worn by the child and attached to their hearing technology such as a hearing aid. Some radio aids can be used by children without personal hearing technology by wearing an earpiece receiver. This may be particularly useful for children with unilateral deafness with the earpiece worn in their good ear.

Most children will have their hearing technology programmed to allow them to hear from both the radio aid and their surroundings so that they can hear other children as well as the teacher. However, it is possible to programme their hearing technology to only hear the radio aid. The microphone can be passed to children speaking in group work or class discussion to aid clarity. The radio aid transmitter can also be connected to equipment such as televisions or computers to assist clarity.

For further information see the National Deaf Children's Society's resource *How Radio Aids Can Help*.



Soundfield systems

Soundfield systems rely on a radio or wireless microphone worn by the teacher and loudspeakers, which are placed around the room. They project the teacher's voice at a consistent level around the setting. These systems can improve the listening conditions for all children in a setting.

Portable systems are available that can be moved between learning spaces as required. Some systems can link with other equipment such as interactive whiteboards.

A child may need to use radio aids alongside the soundfield system and both can be set up to work side by side.

Appendix 3: Communication options

The information below covers the variety of communication options for deaf children. It is important for staff to respect their preferred means of communication.

Spoken language

About 90% of deaf children are from families with no first-hand experience of deafness.⁵ It is important to remember that whichever language is used in the home, the child could still experience a significant delay. In many cases, spoken language will be supported by signing and lipreading.

Speech reading/lipreading

Speech reading or lipreading has an important role in helping children access spoken language. Children under four will not yet be skilled lipreaders. However, by watching faces closely they will be using a range of visual clues to give context to and to aid their understanding of what is being said. As their speech and lipreading skills develop they will play an increasingly important role in helping children access spoken language. Lip patterns of spoken words can help the deaf child identify what is being said and support the interpretation of the speech sounds that can be heard. If used on its own it has a number of limitations, but it is a natural support to understanding spoken communication that all of us use and is especially helpful to the deaf child.

British Sign Language (BSL)

Deaf children with deaf parents who use BSL as their first language are likely to also have BSL as their first language.⁶ BSL is a visual language that uses hand shapes, facial expression, gestures, body language and fingerspelling. It has a structure and grammar different from that of written and spoken English. Many children using BSL will develop spoken English. Deaf children brought up by deaf parents will often start school with age or near age-appropriate language in BSL.

5. Rawlings, B.W. & Jensema, C. (1977) Two Studies of the Families of Hearing Impaired Children. Office of Demographics, Gallaudet University, Washington D.C.

6. Some deaf children in Northern Ireland may use Irish Sign Language instead.

Sign Supported English (SSE)

For many children their spoken English may be supported with signs taken from BSL. When signs are used to support spoken English in this way it is known as Sign Supported English. This is used to add clarity to what is being said, for example, in situations where they may struggle with background noise or if they are too distant from the speaker.

Cued speech

Cued speech is a lipreading tool that enables access to spoken language visually. It uses eight hand shapes in four different positions and accompanies natural speech. Whereas some sounds cannot be fully lipread (for example, 'p', 'm' and 'b' all look the same on the lips and sounds like 'k' and 'g' cannot be seen at all), the cues make it clear exactly what sound is used so that the deaf child may see the sound in each word as it is spoken in real time. This enables the child to develop a mental model of the spoken language regardless of whether they have any hearing or not.

Appendix 4: Assess, plan, do, review

Effective provision for a deaf child will entail:

- a thorough assessment of the child's needs and strengths
- a plan setting out how the setting will meet those needs and overcome any barriers to the child making good progress
- effective implementation of the plan
- a review of the child's progress and the success of the plan to establish whether changes need to be made and what these are.

In England, this 'assess, plan, do, review' cycle has been incorporated into statutory guidance set out in the Special Education Needs and Disability Code of Practice (2015).

It should be remembered that deafness in itself is not a learning disability and, given the right support, deaf children can make the same progress and achieve as much as other children of similar cognitive ability. Having high expectations of deaf children is vital.

1. Assessing what support is needed

An accurate and thorough understanding of a child's needs and strengths underpins good planning and progress. A good assessment will entail:

1. information from the parents and information on levels of attainment
2. the views of parents about appropriate provision
3. the involvement of specialists such as a Teacher of the Deaf
4. the use of specialist assessments
5. the need for access technology and communication support
6. consideration of support needed to meet any specific learning requirements.

Deafness will impact on a range of skills that children will need to learn including:

- listening skills
- attention and concentration
- language development
- literacy skills

- working memory (struggling to retain and process information while working on a task)
- auditory memory (struggling to retain and process information given verbally)
- processing time
- incidental learning
- social skills
- self-esteem
- learning style.

2. Planning the right support

Plans should be developed with the Teacher of the Deaf and should consider:

- the outcomes the child is expecting to achieve at the setting in preparation for the move to primary school
- the shorter term targets to achieve those outcomes
- the provision and adjustments required to achieve the outcomes and targets, meet needs and overcome any barriers to accessing teaching and learning. This would include support strategies and intervention, access arrangements and support from external agencies
- arrangements for monitoring and reviewing.

The challenges presented by a hearing loss suggest that for many deaf children their plan is likely to include:

- targets related to the development of language, communication, literacy, confidence and social skills and the support and interventions required to achieve the targets
- the provision and maintenance of hearing technology
- the provision of communication support
- measures to ensure teaching and learning take place in rooms which provide a good listening environment and have good acoustics
- access to support from specialists such as Teachers of the Deaf
- the provision of support before and after an activity to, for example, introduce the child to a new activity or a new piece of learning before it is presented to the group (for example, introducing new vocabulary) and time after the activity to check that the child has understood
- teaching strategies and approaches to ensure access to teaching and learning
- ensuring staff are 'deaf aware'

- details of who is responsible for the overall coordination of the plan and who is responsible for delivering key aspects of the provision.

3. Implement or do: putting the provision in place

The plan should set out who is responsible for the overall coordination and implementation of any plan. Early years setting are normally expected to identify someone to take responsibility for this. If working as a childminder, this may be someone within a childminder agency. In England, this would be the SENCO with support from the Teacher of the Deaf and/or from an area SENCO. They will have responsibility for the following.

- Ensuring staff involved in teaching and supporting the deaf children receive the necessary information, advice, guidance and training to ensure the student is supported and can access teaching and learning (a template information sharing sheet can be found on page 23).
- Ensuring the child's progress is monitored.
- Liaising with and obtaining feedback from the child and parents on what is going well and not so well.
- Ensuring that support and provision is in place (for example, employment of qualified support staff, equipment, adjustments to teaching spaces to improve acoustics).
- Ensuring early years practitioners implement interventions and strategies agreed as part of the support.

4. Keeping the support under review

The effectiveness of the support and its impact on the child's progress should be regularly reviewed and evaluated, taking into account the parent's views. The setting will have developed systems and processes for doing this. Key areas that are related to the child's deafness that may require consideration include the following.

- Levels of progress in areas of language and communication.
- Levels of overall progress and whether any gaps with other children are widening or narrowing.
- The accessibility of any teaching. For example, checking if the child is able to understand the language and concepts used in a session or establishing where and when the child may experience most difficulty in hearing what is said.
- The effectiveness of communication support. For example, where children communicate in sign language, is the sign language being used accurately and to a high standard?
- The effectiveness of hearing technology.

- Any changes to the child's level of hearing.
- The success in communicating with others, socialising and forming friendships.

Where the child is not making expected levels of progress, the specialist assessments, particularly in language and communication may be helpful in identifying the source of difficulties and revising the plan and ways of supporting the child. All aspects of the plan must be interrogated, with consideration given to the possibility that the support is not effective. A Teacher of the Deaf can again provide advice on this.

More widely, any early years setting should take steps to review the general effectiveness of their provision for deaf children. This may include a consideration of, for example, the listening environments within the setting and whether staff need additional training and support.

About the National Deaf Children's Society

The National Deaf Children's Society is the leading charity dedicated to creating a world without barriers for deaf children and young people across the UK. We support deaf children, their families and the professionals who work with them, and challenge governments and society to meet their needs.

We provide information on all aspects of childhood deafness and hearing loss including:

- education
- audiology
- benefits
- technology
- communication
- additional needs
- parenting.

At the National Deaf Children's Society we use the term 'deaf' to refer to all levels of hearing loss in children and young people, including a partial or total loss of hearing. This includes those who may describe themselves as having a 'hearing loss', 'hearing impairment' or as 'deaf', and includes those with temporary deafness, such as glue ear. We support all deaf children and young people, regardless of their level of deafness, how they communicate or what technical aids they use.

Got a question?

Our Freephone Helpline can answer your questions about any issues relating to deaf children's education or development. Give us a call on **0808 800 8880**, email us at helpline@ndcs.org.uk or take part in a Live Chat at www.ndcs.org.uk/livechat. You can also order our publications through the Helpline.

Raising awareness

Deafness isn't a learning disability. With the right support, most deaf children and young people can achieve the same outcomes as other children. We produce lots of resources to support professionals who work with deaf children and young people to promote best practice and raise expectations. Our

guidance, written by expert Teachers of the Deaf, sets out the interventions and reasonable adjustments that can be made in education settings to improve deaf children and young people's outcomes.

All of our resources are **free** to download or order. They include:

Assessing and Monitoring the Progress of Deaf Children and Young People

Early Years Matters DVD

Look, Smile, Chat Deaf Awareness Pack

Bullying and Deaf Children: A guide for primary and secondary schools

Creating Good Listening Conditions for Learning in Education

To order any of our free resources, visit www.ndcs.org.uk/publications or contact the National Deaf Children's Society Freephone Helpline.

About our free support

We support families from initial diagnosis to adulthood across education, health and social care in a range of ways including:

- free information resources for families including our seasonal *Families* magazine and email updates with the latest news and family stories
- a Freephone Helpline offering clear, balanced information – we offer a free interpreting service for families who do not speak English as a first language.
- local support from our Children and Families' Support Officers
- events where families can meet one another and get support from professionals
- support for mainstream art, sport and leisure organisations to run their activities in a deaf-friendly way, with free resources at www.ndcs.org.uk/me2
- Technology Test Drive loan service that enables deaf children and young people to try out equipment, including radio aids, at home or school.

Buzz website

Our Buzz website is a safe space where deaf children and young people can get support. It also provides deaf young people with a range of information on education and growing up. www.buzz.org.uk

Find us on YouTube

We have a YouTube channel full of videos starring deaf teenagers, parents of deaf children and the professionals who work with them, available from www.youtube.com/ndcswebteam.

For more information about the National Deaf Children's Society:

Visit our website: www.ndcs.org.uk

Facebook: www.facebook.com/NDCS.UK

Twitter: twitter.com/NDCS_UK

Become a professional member

Join the National Deaf Children's Society for free today by calling our Freephone Helpline on **0808 800 8880** or go to www.ndcs.org.uk/professional_support.

About the National Sensory Impairment Partnership (NatSIP)

The National Sensory Impairment Partnership (NatSIP) is a partnership of organisations working together to improve outcomes for children and young people with sensory impairment (SI). The agreed purpose of NatSIP is:

- to improve educational outcomes for children and young people with sensory impairment, closing the gap with their peers, through joint working with all who have an interest in the success of these young people
- to help children achieve more and fulfil the potential of children and young people who have SI
- to promote a national model for the benchmarking of clear progress and impact criteria for children and young people who have SI
- to support a well-trained SI workforce responsive to the Government agenda for education
- to inform and advise the Department for Education in England and other national agencies on the education of children and young people with SI
- to promote collaboration between services, schools, professional bodies and voluntary bodies working with children and young people who have SI
- to promote collaborative working between education, health and social care professionals in the interest of children and young people who have SI.

For more information about NatSIP and to access to resources, visit www.natsip.org.uk – a major gateway for SI professional practice.

The National Deaf Children's Society is the leading charity dedicated to creating a world without barriers for deaf children and young people.

National Deaf Children's Society's Freephone Helpline:
0808 800 8880 (voice and text)

Email: helpline@ndcs.org.uk

www.ndcs.org.uk

The National Sensory Impairment Partnership (NatSIP) is a partnership of organisations working together to improve outcomes for children and young people with sensory impairment.

www.natsip.org.uk



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