

# Unit 3: Developing Language Skills

## a) Language development in Down syndrome

Learning to talk is one of the most important things that children do. It is the basis of their social, emotional and cognitive development. Consequently, progress in learning to talk will benefit every other aspect of the child's life.

For pupils with Down syndrome, speech and language skills are often significantly delayed, more so than their non-verbal abilities. Research has identified a specific profile of speech and language delays and difficulties associated with Down syndrome. These affect their ability to understand language, to produce and use speech, to sequence thoughts and ideas and to put words together into sentences.

Many children with Down syndrome experience some hearing loss, especially in the early years. Over 50% are likely to have a conductive loss due to glue ear, frequent upper respiratory tract infections. These infections tend to be exacerbated by the small sinuses and narrow ear canals typically found in children with Down syndrome. In addition, up to 20% may have a sensori-neural loss, caused by developmental defects in the ear or the auditory nerves.

If the child you are working with does not respond to verbal instructions, it is important to determine if, they are ignoring you, they don't understand what you are saying or they are simply unable to hear. Remember, hearing may fluctuate on a day to day basis, so monitor the child's responses carefully and get professional help if in doubt.

Children with Down syndrome often have difficulty making speech sounds because of low muscle tone in the tongue and lips making their speech imprecise or slurred. A smaller than average oral cavity leaves less room for the tongue which may appear to be too big for the mouth, thus impeding speech production.

Mouth breathing due to nasal congestion or enlarged tonsils and adenoids will also affect intelligibility, fluency and resonance. Vocal chords may be swollen, affecting their ability to vibrate, resulting in the hoarse voice typical of many children with Down syndrome.

Language learning is affected by the child's skills in auditory discrimination and auditory processing as well as their short term auditory memory. All of these are slow to develop in children with Down syndrome.

Short term auditory memory is the memory store used to hold, process, understand and assimilate the meaning of spoken language. A poor short term auditory memory will affect the child's ability to follow and respond to the spoken word as well as the rate at which new words are learned.

Because of their poor working memory, children with Down syndrome have greater difficulty than their peers with:

- Processing and remembering spoken words.
- Repeating back what has been heard.
- Understanding and responding to spoken language.
- Following verbal instructions.
- Learning abstract or unfamiliar vocabulary.
- Remembering rules and routines.
- Developing organisational skills.
- Remembering sequences or lists.
- Sequencing thoughts and ideas.

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Critically, spoken words disappear faster than the child can process store and remember. Lengthy complicated sentences with abstract or unfamiliar vocabulary are likely to create a processing overload. This commonly results in switching off completely or retain only parts of what was heard, typically the beginnings or ends of sentences.

This poses real problems for children in school situations with a high auditory content such as carpet time, circle time, listening to a new story, assembly, whole class discussions, whole class instructions or mental arithmetic sessions.

### b) Strategies to promote language

To reduce the effects of any hearing loss, children with Down syndrome should be placed near the front of the class and background noise kept to a minimum.

To gain the pupil's attention, use his/her name before giving an instruction or asking a question. It is also essential to maintain eye contact and use visual cues such as pictures, signs and/or exaggerated facial expressions to support speech.

#### Picture word matching:

**The human body**

	
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**Cut and match**

toes	hands
fingers	feet

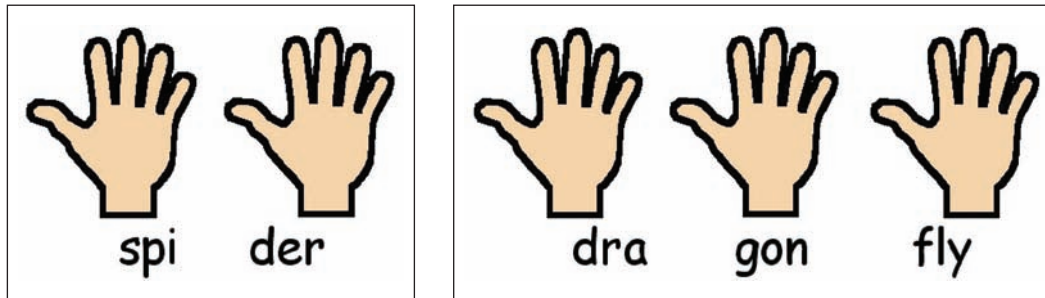
During whole class and group discussion support verbal input in visual form, using keywords on flash cards, symbols or drawings. Once the child has learnt to read, any new vocabulary can be written on the whiteboard, and other children's answers repeated back.

The teacher should speak clearly and directly to the child, taking care over similarly sounding words such as 'trees' and 'cheese'. It is also essential to speak slowly and deliberately emphasising the key words. The more complex words may be broken down and each syllable stressed. For example say 'spi-der, dra-gon-fly'. Allow for more time to process and organise all of the sounds in words.

When teaching more complex words this strategy is useful and words can be tapped out to emphasise each syllable. This will not only help and improve sound awareness but will also encourage slower speech and help articulation.

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Tapping the syllables:



To improve articulation and phonology, consult a speech and language therapist about activities that can be incorporated into the child's learning programme.

It is to be expected that there will be a significant gap between the child's receptive language, the words and sentences understood, and the child's expressive language, the words, phrases and sentences that he/she uses. Keep records of the child's receptive and expressive language and ensure that their true abilities are not underestimated. Observe and write down the gestures, signs and words that the child already uses. Ask the parents to do the same at home and compare the lists.

**Communication matrix:**

	Reward exactly what the child says or signs	
	In school or nursery	At home
Signs		
Single words		
Two or three word phrases		
Longer utterances (not ones copied from other people)		
	Record examples of language used for different purposes	
Initiating a conversation		
Asking a question		
Reporting on past events		
Giving instructions		
Showing imagination		
Planning ahead		

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Listen and respond to all of the child's communications. When speech is unclear use the technique of 'agreeing with the child by saying, either, "Tell me that again. I didn't understand", or use "Ah, you said....", with a question in your voice. Each of these allows you to take the blame and gives the child the opportunity to correct you. Failing that, ask the child to show by signing what they mean.

Give them time to organise their thoughts and find the words they want to use. Count to 30 before jumping in.

Use styles of conversation that will encourage them to expand on and develop their verbal contribution. Try to avoid closed questions that require only a one word answer. Instead of, "Did you like the story?" say "Tell me the best part of the story."

Give choices. Instead of "Where were you when you lost your book?" try "Where's your book? On the floor? In your tray?"

Simplify your language whenever you can. Try to use key words in a sentence e.g saying "Come here" instead of "Come closer so that I can hear what you are saying". Try to avoid negatives and say what you want the child to do. Instead of "Don't stand up," say, "Sit down."

Back up words with gestures e.g. finger to lips and "Shhh" instead of "Stop talking and get on with your work." Use signs and reading activities to support all speech work.

Repeat individually any instructions given to the class as a whole. Check the child has understood by asking them to repeat back what you said.

Give the child with Down syndrome opportunities to practice their language in situations that are meaningful for them. Wherever possible, encourage them to take the lead e.g. giving instructions to their peers as teacher's helper.

To improve short term auditory memory: Play memory games such as "I went to market and I bought..." Teach rehearsal techniques e.g. repeating subvocally an instruction as they complete a task or take a message. Give verbal instructions such as give me the book and the pencil from a choice of three objects. Play barrier games. Kim's Game – lay out a few objects then remove one and ask the child what is missing. Play pairs using picture or word matching or picture/word matching.

### Memory skills:



Say the names out loud. Close your eyes.



Which tool is missing?

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### c) Using sign to facilitate language development

Children who cannot say what they want or how they are feeling may develop inappropriate behaviours. Visual prompt cards or cards showing feelings may empower the child to communicate their needs visually before they can do it verbally.

Children with Down syndrome are particularly skilled in learning to use gestures long before they can talk. First words are typically delayed even when early vocabulary is understood. Being able to sign means children are able to communicate more effectively and thus frustration is reduced.

Ideally, signing systems such as Makaton or Signalong should be introduced before the child starts school. However, it is important that parents and school staff are familiar with the child's signing system and can back it up both at home and in school.

Signs help children to use new words while their speech is still difficult to understand. Signs are a bridge to speaking and will be needed less as speech develops. As long as adults talk as they sign, signing will not delay speech development.

**Example of communication book – using symbols to describe emotions and feelings:**



Children who sign have been found to acquire larger spoken vocabularies than those who don't. However, it is important that speech sound work is ongoing alongside the use of signs. The focus should always be on learning to say words with signs as an aid not as an alternative.

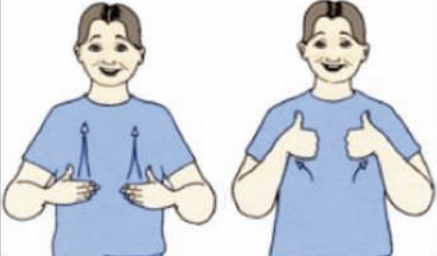


Speaking should be encouraged as the main means of communication from around four years of age. By school age, signs should only be used when necessary and speaking should be the focus for daily communication.







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Nevertheless, communication will be improved if the whole class are taught to use and understand the first 50-100 signs.

## Question signs:

<p><b>How are you?</b></p> 	<p><b>How much?</b></p> 	<p><b>Why</b></p> 
<p>Flat hands – palms back, pointing in, thumbs extended and move up and down. Close fingers thumbs up to sign good.</p>	<p>Open hands (palms in, pointing forward) side by side in front of body, arc out to the sides and finish with a small downward movement. Eyebrows should be raised.</p>	<p>Working index finger with hand (palm in, pointing up) at side of face, make a small horizontal inward circle.</p>

## Signs for snacks:

<p><b>Eat</b></p> 	<p><b>Dinner</b></p> 	<p><b>Crisps</b></p> 	<p><b>Biscuit</b></p> 
<p>Working bunched hand (palm back pointing up) taps twice at working side of mouth.</p>	<p>'N' hands (palms back, pointing in) move alternately to mouth.</p>	<p>Working bunched hand touches supporting flat hand (palm up, pointing in) and moves to working side of mouth finishing palm back, pointing up.</p>	<p>Working bunched hand touches supporting flat hand (palm up, pointing in) and moves to working side of mouth finishing palm back, pointing up.</p>

## d) Teaching reading to teach talking

Children with Down syndrome have difficulty learning language from listening alone. However, they find it easier to learn visually.

Printed words, unlike speech and signing, are permanent and remain present for as long is necessary to process them for meaning.

Print can be used from as early as two years of age to support language learning. Many children with Down syndrome begin to read at an early age and can remember printed words with ease.

Reading to children with Down syndrome and teaching them to read may be the most effective way to develop speech and language skills from infancy right through the school years.

Research studies show that teaching reading has a significant effect on the development of language and working memory for children with Down syndrome.

All language targets can be taught with the aid of written materials, even to children who are not able to remember the words or read independently.

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Reading activities teach new vocabulary and grammar and enables children to practice complete sentences, teaches word order and supports correct pronunciation.

Reading can help develop sound awareness for example words such as sun and fun can be more easily differentiated visually than by the auditory route. Additionally, we can teach the concept of the initial sound or the sound at the beginning of a words speech at the level of sounds, whole words or sentence production.

Every area of the curriculum should be viewed as an opportunity to develop new vocabulary and use that to teach and practice sentence structure and grammar.

### e) Useful reading

Alton, S. (2001) **Children with Down's syndrome and Short term Auditory Memory Information sheet.** Down's Syndrome Association.

Buckley, S & Bird, G. (2001) **Speech & language development for children with Down syndrome.** Down syndrome Issues & Information. DownsEd.

Kumin, L. (2001) **Classroom language skills for children with Down syndrome.** Woodbine House.

### f) Language resources

#### **DownsEd**

The Sarah Duffen Centre  
Belmont St.  
Southsea  
Portsmouth,  
Hants. PO5 1NA  
Tel: 023 9285 5330

#### **LDA**

Duke St.  
Wisbech  
Cambs. PE13 2AE  
Tel: 01945 463441

#### **Makaton Vocabulary Development Project**

31 Firwood Drive  
Camberley  
Surrey. GU15 3QD  
Tel: 01276 681368

#### **Philip & Tacey**

North Way  
Andover  
Hants. SP10 5BA  
Tel: 01264 332171

#### **The Signalong Group**

Communication Language Centre  
North Pondsides  
Historic Dockyard  
Chatham  
Kent. ME4 4TY  
Tel: 01634 832469

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### **Winslow Press**

Telford Rd.  
Bicester  
Oxon. OX6 OTS  
Tel: 01869 244644

**Talking tins** – records a message of up to 10 seconds so that you can make a talking sign or label. Message plays back at the touch of a button. Inclusive Technology.

**Voice pad** – a small thin pad that allows you to record and play back a message (up to 10 seconds). Inclusive Technology.

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