

Unit 5: Reading

a) Introduction

For most children with Down syndrome, reading is a strength. Reading not only provides an area of the curriculum where many children with Down syndrome can excel in school, but it is also a skill that many children continue to develop to a useful and practical level, enabling them to become more independent and more able to integrate into the community as they grow up.

Reading for children with Down syndrome has other benefits too. They will not have mastered language in the same way as their typically developing peers. On entering school, they will not have a wide vocabulary and will not be speaking in sentences. Print however, makes language visual and enables them to learn to read and develop their speech and language skills simultaneously and many children with Down syndrome learn to read and sign words before being able to say them. It also helps to overcome the difficulties that many children have with learning through listening. Print can be looked at for as long as needed to help with processing and retention, overcoming difficulties with auditory short term memory. It can:

- Develop awareness of grammar and sentence structure.
- Improve articulation by providing more language practice.
- Increase vocabulary.
- Develop and reinforce general knowledge and understanding.
- Help access the curriculum in school.
- Increase working memory.
- Increase self-esteem.

b) Learning to read

In the early stages of reading, most typically developing children learn to read initially through a logographic approach; learning whole words by sight or their visual pattern. They then progress to an alphabetic or phonological approach – learning by listening to sounds and beginning to use letter/sound correspondences to decode or break words into separate sounds in order to read and spell them. As good visual learners, children with Down syndrome make considerable progress in the sight recognition or logographic stage and are often able to build up an impressive sight vocabulary of words, but they can struggle with the transfer to the alphabetic or phonological stage, often relying on logographic visual memory strategies to maintain their progress in reading.

Difficulties with learning from listening generally, as well as possible hearing problems, auditory discrimination, processing and problem solving skills, make learning to read through a phonological route harder for many children with Down syndrome, but unless they acquire these additional strategies, their reading progress will eventually slow down or even stop.

Many children with Down syndrome however, can and do learn to apply some level of phonic knowledge to their reading and spelling, but they usually learn these skills later and at a slower rate than their typically developing peers. In addition, this ability will vary greatly, with some children using only limited, basic skills such as use of initial letter to read or spell an unfamiliar word; whilst others learn to apply much wider phonic strategies. For many pupils it is often around year 4 that they begin to apply their phonological skills to their reading although this does vary from child to child. Professor Buckley's research, (2001), claims that children with Down syndrome begin to show more phonological awareness when they reach word reading skills of a 7-8 year-old.

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c) Getting started

Matching pictures

In the early years teaching reading should begin when the child can understand 50 or more spoken words and involves matching, selecting and naming skills. It is therefore important to ensure first of all that your child can match objects and then pictures together successfully. Photos or pictures of familiar everyday objects and family members are ideal.

Matching words

Once they can match pictures, proceed to matching words together. These first words must be familiar and within the child's understanding. Many of the high frequency words from given lists will have little meaning for the young child with Down syndrome, especially if used in isolation. This is because children with Down syndrome have delayed speech and language and their vocabulary will be smaller than their typically developing peers. Many of these more abstract high frequency words therefore will not be familiar to them yet. It is important to take this into account and when you start teaching reading, to work with words that are meaningful and familiar to the child. These will mainly be nouns, followed by verbs. Some of these will, of course, be in the high frequency word lists.

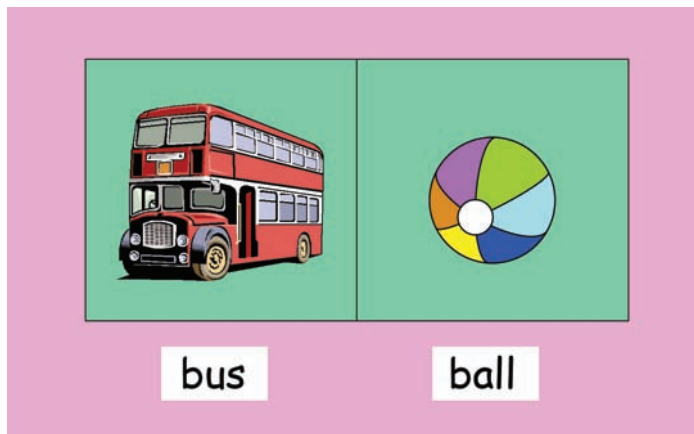
As the child's own personal sight vocabulary of familiar and meaningful words develops, the more abstract words from the word lists can gradually and carefully be introduced and embedded into small phrases and sentences. E.g Here is mummy. This is my house etc.

Choose a small number of words e.g. 2 to 4, which are familiar and important to the child, e.g. family names and familiar objects. Put the words onto a Lotto board and make an identical set of separate flash cards. Initially, you could provide photographs to accompany the flash cards, to ensure the child understands their meaning. The picture can be placed on the Lotto board above the word. Ask the child to match an identical flashcard to the words on the Lotto board. Proceed to removing the picture and ask the child to match the words only.

Proceed to use the **Match, Select, Name** method:



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Match, Select, Name

- Child **matches** words together. You say “*This says mummy, can you find one the same*” “*Put mummy with mummy*”.
- Child **selects** words on request – i.e. you say “*Give me Mummy*”. The child selects the correct word, (**Mummy**) and gives it to you.
- Child **names** the words – i.e. you point to or hold up a word and ask “*What does this word say?*” The child says or signs the word.

Have handy a post box or wicker basket into which the child can “post” the flash card – or even use the toy lorry in the sand tray if more motivation is needed! Make it fun!

Make individual home made books based on the child’s interests and experiences. Ask parents to provide photos of any weekend or holiday activities, building up the words into short phrases as appropriate. The aim is to enable the child to build short phrases (two words together then three words together). Have an identical set of word phrases for the child to match to the phrase under each photo in their book.

In school use a digital camera to take photos of school activities and friends and make little books with one or two words or small phrases depending upon the pupil’s progress and level.

Make an action book using photographs of the family members performing routine and familiar actions to introduce verbs; “Mummy sleeping, Daddy eating, Danny swimming”. Add new words gradually, continuing to use the match, select, name method aiming for words with personal meaning for the child and ensure these include verbs.



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Gradually include some of the more abstract high frequency words such as “I”, “to”, “and”, “my” etc. Make books based around the child’s interests – e.g “I like.” “ I go”.



I like baby



I like cakes

Continue to teach and reinforce the words through Word Lotto boards.

I	daddy
school	swimming
to	like
go	my

As well as home made books, create topic books which can be used to teach category words e.g. furniture, animals or transport. Extend them to include whole class topics differentiated to the child’s level. Practising proper sentences in reading, helps the child learn to use function words and increasingly correct grammar in speech.



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d) Summary of progression

- Single word.
- Phrases.
- Sentences.
- Personalised books for everyday routines.
- Books with less familiar sequence of stories.
- Target grammar and syntax.

Assess early comprehension skills regularly as pupil's reading ability can surpass their level of understanding. Assessing comprehension can be best achieved in the early years by asking the child to match words or simple phrases to the appropriate picture.

Record all words the child learns to read so you can keep a record of the words in their sight vocabulary – you will need this to check consolidation.

Play games – such as track and board games where the child has to read their flash card before they can move their counter along the track – playing with another child using their own flash cards develops social interaction with their peers.

Continue to build longer sentences, introducing more of the high frequency/abstract words and connecting words and aiming to develop grammar and syntax but bearing in mind the need to keep in line with their speech and language development and ability.



I am jumping on the trampoline.



I am playing with Anna.

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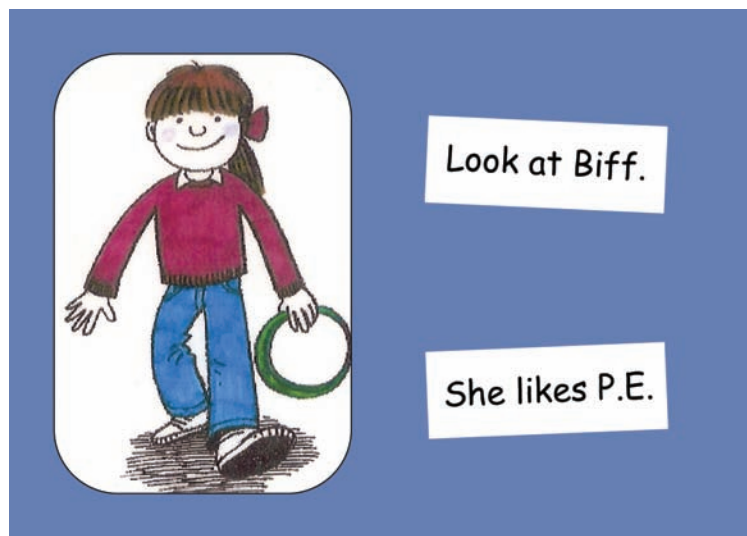
Start to link reading with early writing skills and sentence construction – ask the child to sequence a sentence using flashcards from their sight vocabulary by copying a phrase from one of their books. When the pupil can do this, cover the phrase under the picture and ask them to construct the sentence with their flash cards using the picture prompt alone.



I can pull

Introduce commercial reading books alongside personalised books. These should have uncomplicated stories and ideas with meaningful vocabulary in simple, short phrases and have clear illustrations. Books should be selected that reflect real life experiences familiar to the child as much as possible. Fantasy can be more difficult for some children with Down syndrome to understand as can innuendo, reading between the lines etc.

It can be helpful to make extension activities and personalised books to simplify a story or reinforce some of the words and characters used in the commercial reading books.



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Continue to target comprehension by asking questions about the story – provision of written questions with a choice of written answers – cloze procedure – will avoid any difficulties the child has with expressive language and help overcome memory problems.

Assessing comprehension using visual and reading strengths and overcoming difficulties with memory and expressive speech:

Page 1	Who came to the house to play? Biff Will Chip Wilma
Page 2	The children went outside. What did they climb? A house a tree a ladder
Page 3	What was in the tree? Biff a tree house a dog
Page 4	Who mended the roof? Dad the children Wilma
	Who is your favourite character? Chip Floppy Wilf Wilma Biff Draw a picture of them.

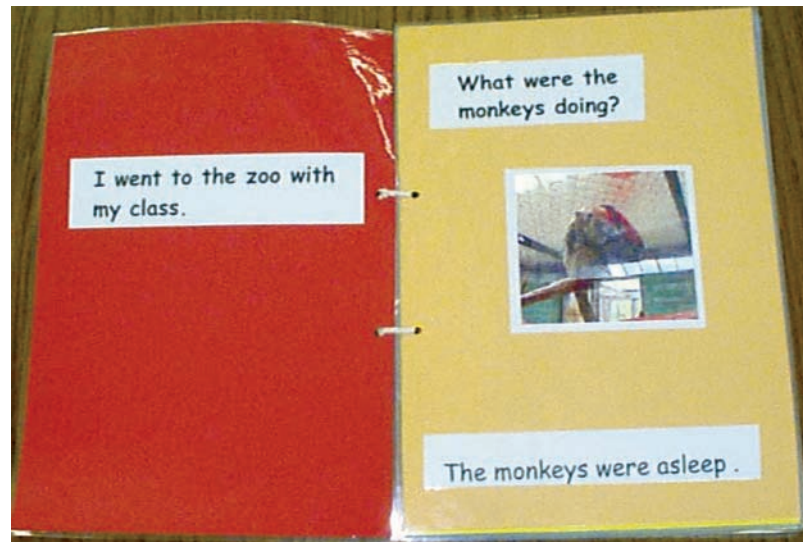
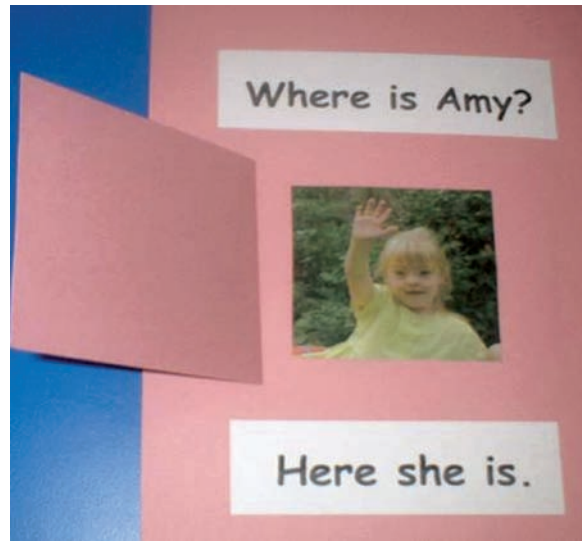
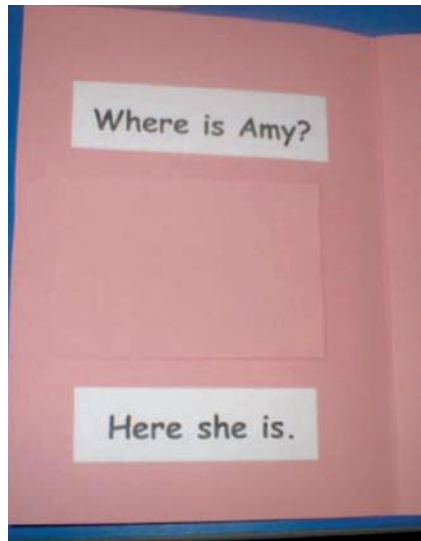
Target specific areas of grammar such as prepositions and questions using real life and meaningful situations and experiences. Using sign, picture, symbol and word will help the pupil understand and consolidate the word and its meaning.

I am my barrel.

Gergo is the car.

Anna is the car.

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Access the computer and literacy software such as Clicker and Talking Stories, Oxford Reading Tree, Accelerated, etc to develop reading and comprehension skills.

Speaking for Myself Plus is an excellent software programme specially for children with Down syndrome and introduces words with symbols and signs to develop a whole word sight vocabulary and speech and language skills. First word flash cards speak and show the text with the option of a video clip of the sign of each word used.

A Busy Day (Inclusive Technology) helps children to understand that text carries meaning, by encouraging them to hear, say, and match words to pictures, and move the words around on-screen and is based on vocabulary that is familiar and meaningful.

As a general rule, the introduction of symbols to aid reading should not be necessary for most young children with Down syndrome. However symbols can be effective in teaching older children more abstract concepts such as time or in framing "what," "who," "where" and "why" questions.

Where children are simply not learning to read sight words, then Communicate in print 2 is a very useful software programme to make resources (www.widgit.com). Symwriter is another software programme which provides words and symbols and where pictures can be added.

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e) Introducing phonics

The teaching of phonics is now a central part of the Government's approach to the teaching of reading.

Although children with Down syndrome have more difficulty learning phonological skills, many young children are motivated and able to learn letter sounds through signing and picture prompt schemes that use a very visual approach such as Jolly Phonics or Alphabats. They should therefore, still access the group phonic/letter and sound sessions alongside their peers. This will not only introduce them to early phonics which will be of use to them at a later stage in their reading, but it will also provide valuable practice in developing their articulation and speech sounds and mean they are included into a regular whole class activity.

Use as many visual and kinaesthetic strategies as possible such as pictures, actions and sign, music, magnetic or plastic letters, Jolly phonics, cued articulation, picture sound cards as well as computer software such as First Keys Plus, Wordshark etc.

Provide an array of objects that can be sorted into their initial sounds into labelled pots – e.g. child places a model pig, a pencil and pin into a pot labelled with the Letter P.

Sort words they can read from their sight vocabulary into groups beginning with the same initial letter; use a posting box to make it fun.

Ss	Bb	Mm	Tt	Pp
swim	ball	Mummy	to	play
school	baby	me	Tom	Polly
Sally		my	the	

Ask differentiated questions to help keep the child focused and ensure good inclusion, by speaking but also by writing the question on white board to overcome difficulties with auditory processing.

More focused phonic work should be gradually introduced, once the child has a sight vocabulary of approximately 50 words. Link all phonic work to the child's sight vocabulary, using words the child can read.

Teach initial sounds, graduating to CVC words and simple blends.

Teach simple word families with similar beginnings and endings – onset and rime is particularly good for children with Down syndrome. Don't lose heart if progress is slow. Persevere and they will eventually cotton on.

Daily practise both with sight words and phonics is essential.

Developing reading for pupils with Down syndrome will not only open doors into the world of print, but it is also a powerful tool for developing speech and language skills

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and accessing the curriculum. In addition, it develops self esteem and opens up more opportunities to live more independently in the wider community.

Recommended software

- From 2Simple software www.2simple.com: **2Simple 2Connect** – Easy to use concept mapping programme for Key Stage 1 and upwards – 2Connect enables children to organise their thoughts and ideas in a meaningful way. Create Mind/Concept maps which connect ideas directly to writing with a single click. Click and type then drag one idea over another to create an automatic link. The concept map becomes a word bank – simply click on a word to drop it into your writing. It can also be used as a voice recorder.
- **2Simple2Create** – Children from Foundation Stage to all key stages can make their own multimedia stories to read by mixing text, sound and animation and record their own tunes and their own voices. Very simple to use and books are quickly created – use your digital camera to sequence and you can also make differentiated resource books across the curriculum. Very versatile.
- **love2read** create your own books – Carefully designed books combine key words with your photos to bring reading to life for your child. Upload your photos, personalise the text and the company will print a unique book that will give your child a real head start with reading. Company started by a mother of a child with DS. www.love2read.co.uk
- Book templates for starting with reading include e.g. 'My Family ...' add in your own photos; 'I like ...' add in favourite people, objects, places, activities, 'This is ...' Add photos of familiar people, objects or places. Introduce words such as 'my, our, the and a'. 'I see ...' – keep it simple or introduce more complex sentences. Add photos of people, objects, and places.
- **Switchit Maker 2** from Inclusive Technology www.inclusive.co.uk or www.switchitmaker2.com which is a dedicated site for this programme. This programme turns your text, images, movies and sounds into simple on-screen activities which are automatically accessible using a mouse, whiteboard, touch monitor, keyboard or switches. Make talking books starring your pupils or a slide show of a recent trip using your digital camera. Specially designed so that children can make activities as part of a lesson.
- **Clicker 5** available from www.cricksoft.com

Reading schemes

- **Heinemann Sails** reading scheme has simple story books using sentences which include high frequency words with interesting text and pictures.
- **POPS reading scheme – Plenty of Potential** is a scheme that has been developed by the mother of a boy with DS in conjunction with a Speech and Language therapist and teachers. It has a series of story books (Red and Blue Elephant Series) about a family who have a son with DS. The stories are about things that happen in families rather than abstract ideas. Word cards, word matching and lotto games are included along with a lot of other activities including basic phonic games. Each page has a tiny elephant hidden in the picture for children to find. It supports an integrated approach to learning to read and slow easy steps to learning to decode. It supports synthetic phonics and has a fun elephant slider game to reinforce phonic work as well as work cards. Characters are linked into Clicker grids. www.popsresources.com

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