



The Champion Centre  
Tamariki Toiora

***Helping Children with Down Syndrome  
Reach Their Full Potential in  
Early Childhood Centres  
& Primary School***



## Introduction

Down syndrome is the result of an additional chromosome in all, or most, of the cells of the body. Some children are more impacted than others, for reasons we do not yet understand; and there is great variability in how successful children with Down syndrome are in the classroom. Some children with Down syndrome have successfully passed NCEA exams; while others continue to struggle with basic tasks. However, all will have had developmental challenges to some degree in their physical, intellectual, language, social, and emotional development; and will need support for each new skill they work to acquire. So if children with Down syndrome are to reach their full potential, they need teachers who understand them as individuals and as individual learners and can support them to reach as high as they are able.

This booklet has been developed to help you, as the teacher of a child with Down syndrome, know what to look for and how to help the child in your classroom. In partnership with learning support staff and with the child's parents and whānau, you can be instrumental in helping all children reach their full potential, not only during the time they spend in your classroom but over the course of their lives. New research is showing that even adults with Down syndrome are continuing to make positive developmental changes. The role of the teacher is to see beyond the Down syndrome to the child, to scaffold their learning, believe in them as learners, and never give up on them.

## Supporting language and communication

Language is the base upon which reasoning and problem-solving skills are developed. Communication is the basis for meaningful relationships with others and therefore the context of learning from those around them. It is therefore vital that children with Down syndrome are enabled to develop their language and communication skills to the highest level of which they are capable.

As with any child:

**Language is learned through meaningful exchanges with meaningful people on meaningful topics over an extended period of time.**

Being able to communicate with parents, teacher and peers is so important because it contributes to children's social, emotional, linguistic, moral and cognitive development.

## Helping children extract meaning from language

To extract meaning from engagement with others depends on being able to attend to the language and nonverbal communication of teachers and peers. Children with Down syndrome often have challenges to their hearing; they process language more slowly than other children; and they find it harder than

typically developing children to know what to pay attention to in the behaviour of other people. You can help them with all these challenges.



Because many children with Down syndrome have multiple and successive ear infections, their **hearing can fluctuate from day to day, week to week**. Because they often cannot hear well, they are in danger of not paying attention to the language around them. They need overt support to learn to listen and to attend to what is going on in the classroom, even when they don't have an infection.

Even when they can hear well, children with Down syndrome have **difficulty processing aural information**. We often speak too quickly for children with Down syndrome, so it is important to slow down.

And when you need to repeat something it can help to repeat it exactly, rather than rephrased, as you might do with a typically developing child (see text box). If children do not process oral language well, they may make sense of only part of what they hear and misunderstand it as a result.

**Speech is difficult to process** because it is an auditory trace that not only disappears as soon as it has been produced but also does not sound the same each time it is produced. You may think you are saying the same thing, but it may be at a different pitch, be said faster or more slowly, may be louder or softer, etc. And different people saying the same thing or the same person rephrasing the same thing can be confusing. Finding ways to make speech visible through, sign, pictures or text is vital. Many children with Down syndrome come to school knowing some signs (either Makaton or New Zealand sign language). These should be learned as quickly as possible by the teaching staff and used in conjunction with spoken words.

Without good attention and listening skills, children will not be able to develop an understanding of the world around them, or of the material presented in class. They may develop "behaviour" strategies for avoiding being part of the life of the classroom and risk missing out on important learning and social opportunities as a result. They will also miss out on developing a sense of success as a problem solver, which will further damage their ability to be as successful a learner as they might otherwise be.

Here are some more strategies to help a child with Down syndrome pay attention to language and extract meaning from what is said:

- Make sure the child is fully attending to you as a speaker by using their name and making sure they are looking at you.
- Use gestures or simple signs that help make what you are saying visible. For example, "I see with my...." (pointing to our own eyes) or "I need you to get your cup for a drink" (mimicking the act of drinking from a cup)
- Pause at the appropriate points to enable the child to provide information e.g. "I like to eat fish and ....", "James ate his soup with a ...."
- Relational terms – these cues tell the child more information is required and help her/him to give it e.g. "... and....", "...and then....", "after that....", "so...." "because....", "but....", "however....", "except....", "if....", "unless....", "or....", "which was on the....", "next to...."
- Graduated questions can help the child retrieve relevant information, i.e. ask a sequence of questions each of which seeks a single piece of information e.g. "where are these people? How do we know that?"
- Rephrasing or summarising can help the child to offer more information e.g. "You said there was thunder. What happened next?"
- Direct questioning to assist recall e.g. "After Peter saw the wolf, what did he do?"
- Be overt about the language of feelings – label and identify feelings in the children and others and draw their attention to facial expressions, vocal features and the body language of feelings. Talk overtly (and simply) about why the feelings might be there, e.g. "He's crying because he hurt his hand" or "you are angry because you wanted that toy"

### Helping children retain and expand their language skills

All children learn language over time and need lots of opportunity to use and reuse words in different contexts so that they understand their meaning and how to use them for communication. For any child, using a word once does not mean it has been learned and generalised. Similarly, responding to language appropriately in one context does not mean that it has been fully understood and will be responded to appropriately in another context. Children with Down syndrome need many more opportunities to generalise their language across contexts and to understand the meanings of words than typically developing children, so make sure they have those opportunities.

Words, particularly little 'relational' ones such as 'beside', 'next to', 'by' and 'against' may need to be retaught several times (or at least checked that they are understood) so that directions that contain them can be understood.

Always think twice about the words that you use and whether they have been understood by the child. If a printing activity is involved, does the child



understand the words 'word', 'finger spacing', 'gap', 'in between', 'touching the line', 'on the line', 'by the margin' when they are used in a printing instruction. It helps to find out what word the child themselves uses for things (for example, have they learned 'glue' or 'paste') so you can use the same word.

**Supporting children's spoken language:** Children with Down syndrome find the rapid fine motor movements required for clear speech (and tidy eating) difficult. This results in imprecise articulation and (often) the loss of the little grammatical markers (e.g., plural 's', articles 'the/a' and past tense 'ed'.) Because the hand movements needed for signs are quite a bit easier to manage, many children support their spoken language with signs (either from Makaton or from NZSL). This is to be encouraged because it allows the child to express themselves to others and be part of the conversations, if others take the time and trouble to learn their signs. Signs, like speech and written words, are just a means of getting ideas expressed in language out so other people can share them.

Children with Down syndrome will need to be taught about much of the pragmatics of conversation because, without active support, they will not pick up on the subtleties of interaction and how to negotiate and take the perspective of others. They need to be taught how to take cues from other children, how to read emotions, and how to interpret what other children are saying to them: not just what people are saying, but what they mean.

### **Effective communication is the basis of effective learning**

#### **Supporting learning**

Learning is rarely a straight path for any of us; but for children with Down syndrome it often seems to be particularly circuitous. Learning happens because new connections are being formed in the brain. And in the brains of children with Down syndrome forming these connections can take longer and can need more repetition and reinforcement to be maintained than in the brains of typically developing children. As a result, skills may appear and then apparently disappear, only to reappear later. Sometimes this is the result of periods of poor health or the transition to a new environment; but at other times, learning requires not just the 'addition' of new information but the 'reorganisation' of existing knowledge and this can temporarily or permanently dislodge things that have already been apparently learned. As each new skill or piece of information is learned, it is important that existing ones not be forgotten, but reinforced through activities that integrate the old and the new.

An ability to **sequence and to process sequences** (of words, of numbers, of activities and ideas) is at the core of learning, and children with Down syndrome

find sequencing challenging. They process more slowly than typically developing children, and their challenges with memory mean they often forget earlier parts of the word, sentence, instruction, or idea by the time they reach the end. In other words, because auditory processing is poor, it does not support memory (with internal speech) the way it does for most typically developing children.

Here are some strategies that teachers and other learning support personnel can use to **help children learn in the classroom**:

- Use visual schedules to help the child understand the routines of the classroom and the sequence of activities expected
- When giving instructions or directions present them both orally and with a visual support (e.g., a picture or a written word) and make sure they are simple and step-by-step and that the child is watching, listening and attending. Be aware that children with Down syndrome may process only part of the instruction and appear to have done the opposite of what was intended (e.g., "don't cut it" may be processed as "cut"). Alternatively, if they did not understand they may simply copy another child.
- Help children understand the steps involved in a complex task and help them think about those steps, perhaps by saying "What do I need to do before....?" "What do I need to do next....?", "What do I need to do after....?" In this way, they will begin to understand the structure of the task (beginning, middle, end).
- Remember that children with Down syndrome are not as flexible in their thinking as other children and will have difficulty revising their approach to a task already learned. Where possible teach to the endpoint you want to achieve; breaking the task into manageable components.
- Limit the distractions around the child while still keeping them as part of the classroom. Think about providing them with only the tools (pencils, ruler, etc.) that they need for the job at hand.
- While Buddy systems are important for social connection, other young children will not understand the challenges of learning for children with Down syndrome, so limit peer teaching/learning expectations.
- Be overt with the language of "learning to learn" is important. For example, when selecting a book it is important to talk about the concept of reading for meaning e.g. "Let's find out what this book is about..." "What will happen next?" "What was this book about?"
- Let them use a keyboard if they find this more effective than using a pen or pencil that requires more fine motor control that they are able to manage.
- Make sure you know whether they are staying on



task, perhaps by having them working near the teacher. Help them avoid paying attention to irrelevant details of the task.

- Give them time to process; support them when they make mistakes; and help them achieve a sense of success and achievement.
- Make sure they know that you care that they do their best. Give praise and encouragement and expect to repeat verbal prompts and reminders even if they have a visual prompt as well.
- Connect with the child's parents and make sure you have good communication so that the parents understand what the tasks of school are and can support the child to practice them at home.

**Motivation** for learning depends on interest and meaningfulness. Ensure tasks are meaningful and where possible, playful, so that children are engaged and motivated to participate.

### Supporting behaviour

Like all children, children with Down syndrome can push the boundaries. Like all children, they need to understand what is and is not appropriate behaviour for the classroom. The challenge for you as their teacher is how to help them understand the classroom routines and expectations, and help them learn those without either being too lenient or too strict. (Down syndrome is not an excuse.)

Children with Down syndrome need predictable and constant routines with safe outcomes. It is by this means that they gain understanding around cause and effect, order, organisation, placement, time and where they "stand" in relation to this. If they do not understand a task, or have been distracted from it, they may engage in disruptive behaviour. **Disruptive behaviour is communication** and needs to be treated as such: what has frustrated the child? What part of the task or game was not understood? How can the child be supported to get back on track?

It is important to remember that the challenges of language and communication may mean that a child does not understand an instruction or request in the way it was intended (or at all). They may nonetheless be able to 'follow the crowd' and complete a task by observation of others; at least on some occasions. It is important, therefore, to ensure that instructions have been genuinely understood. It is also important that other children and teachers understand them; and so finding ways to ensure that communication is two-way is important (see section on language and communication above).

Supporting children with Down syndrome to engage with peers, join their activities and form friendships is as important to their development as learning facts and skills. They may want to join in, but they may not know how to. Do not misinterpret this as not wanting to. And if they are destructive of other children's games, this is likely to be because they do not know how to join.

## Supporting children as people

Yes, children with Down syndrome have challenges as learners. But they also have interests, personalities, histories, ideas, preferences, worries and pet hates like the rest of us. The relationships they form with those around them and what they do with their lives will depend on the supports provided by their peers and the key adults in their lives.

Many studies have shown that being able to have a degree of control over what goes on around us is essential to psychological well-being. If this control is lost or removed 'learned helplessness' often results. Retaining a belief in self-efficacy and exercising some control over surrounding events is no less important for children with learning disabilities than for anyone else. The active contribution of the child with Down syndrome is fundamental to the progress of their development. You can help them engage with their environment and make the best of their abilities to learn and develop.

Inclusion means acceptance and belonging. Inclusion allows meaning-based learning to happen. It enables a circle of friends to exist wherein individual differences are accepted and valued, and where the handicap no longer defines the individual.

And above all: Never accept that learning has ceased:

**A plateau may be a place that some children with Down syndrome will visit, but don't expect and encourage them to live there. Learning is a lifetime experience for people who have Down syndrome, just as it is for those who do not.**

