

# Education

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## Supporting children to learn

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Every learner who has Down's syndrome is unique. Individuals differ across all aspects of social and cognitive development as well as in their family support and educational opportunities. Every individual is helped by teaching staff having high expectations.

Children who have Down's syndrome need skilled teachers who understand their current skills, abilities, strengths and interests and who can teach them the next steps through engaging teaching and learning activities. They need to be welcome, socially included members within their classrooms and schools. The positive attitude of the whole school is fundamental: schools need a clear and sensitive policy on inclusion with committed and supportive staff, especially the senior management team.

Most children who have Down's syndrome need additional support for optimal learning in all types of schools. The quality of support the child or young person receives can have a tremendous impact on his or her learning.

Class teachers and teaching assistants (TAs) should meet regularly to liaise, plan, feedback and monitor progress. A communication book to record progress, ideas and feedback is valuable, especially where more than one TA is involved.

### A specific learning profile

Information about learning strengths and challenges associated with Down's syndrome, sometimes referred to as the learning profile, can be incorporated into the framework for understanding all children's development.

Methods that support success include:

- setting up and scaffolding situations for learning by imitation
- daily practice of targeted skills built into engaging class activities
- planned activities that become part of the child's routine
- support for positive behaviour and for friendships
- adaptations that use learning strengths and support areas of difficulty.

From this basis, teachers can plan differentiated programmes of work across the curriculum. They can share their expertise about what works well with new class teachers as the learner progresses through school.

The learning profile of strengths and challenges is summarised below.

### **Vision**

Every child who has Down's syndrome has a visual problem to some degree, even if the child does not need glasses or is wearing the correct glasses. Children's vision lacks fine detail and sharp contrast so print and other visual material needs to be made bigger and bolder. A teacher of the visually impaired can check the visibility of the material in the classroom and advise on modifications that might help, as well as ensure that as children progress through school all teaching staff are aware of their needs.

### **Hearing**

The majority of children who have Down's syndrome experience hearing loss. This is mostly conductive loss resulting from otitis media with effusion (glue ear) but can also be sensorineural loss.

Treating hearing loss and addressing hearing related needs is even more important for learners who have Down's syndrome, as we now know that conductive hearing loss in the early years has a more significant effect on later speech and language development than it does for children who do not have Down's syndrome. Meeting hearing and associated learning needs is therefore a high priority.

### **Speech, language, and communication**

Children who have Down's syndrome frequently have speech and language impairments although the nature of their language learning difficulties can differ substantially between individuals.

Both hearing loss and delayed development contribute to language learning. In addition, the learning profile includes verbal processing difficulties associated with verbal short term memory, as well as phonological and morpho-syntactic difficulties (phonological problems reflect difficulty in distinguishing and manipulating small units of sound. Morpho-syntactic problems relate to the understanding and use of small words and word parts with grammatical meaning, such as "-ed", "-s" and "-ing").

Children show specific strengths in receptive vocabulary which means that expectations for concept learning across the curriculum can be relatively high; children typically have more advanced vocabulary than grammatical knowledge. Sign and gesture can support new vocabulary learning and visual scaffolds such as photos and pictures support language learning. Enhanced verbal environments that build semantic and syntactic knowledge help to develop verbal abilities.

While understanding precedes expressive ability for all children, this balance is frequently larger than usual and is sometimes vast, which in some cases leads to children's understanding and other abilities being underestimated. Individuals are likely to have difficulty expressing their thoughts and feelings.

Children and young people need sufficient time to process and respond to information. It may be more difficult for them to ask for information or help. Adults may tend to ask closed questions or finish people's sentences without giving much needed time or other ways of

supporting them to communicate. As a result, children often receive fewer opportunities to engage in conversation.

A significant minority of children who have Down's syndrome have social communication difficulties and may meet criteria for dual diagnosis of autism spectrum condition (ASC).

Children and young people may experience a range of difficulties that affect their speech clarity and fluency. Speech skills may follow a different, rather than slower, developmental trajectory with children more likely to use inconsistent pronunciations. Therefore, a proactive approach to implementing graded speech activities is recommended, for example to develop awareness and production of sounds, words and syllables.

Most learners have significant speech, language and communication needs throughout childhood. Activities to support the full range of speech, language and communication needs that individual children experience should be directed by a speech and language therapist.

### **Working memory and processing skills**

The learning profile includes evidence for specific visual-spatial learning strengths and, for many, an ability to learn by imitation which exceeds what might be expected from their other abilities. As a result, they may readily learn skills that use their strengths, such as ICT use, reading or visual arts.

Specifically, poor verbal short-term memory for storing and processing verbal information and capacity for manipulating information in working memory should also be considered within the profile. In the classroom this can affect attending to and learning in situations which need listening attention/skills, such as at lesson presentation times, when listening to a story, in assembly and whole class discussions, and for remembering and responding to verbal instructions and long sentences. There are many practical ways to support these needs.

Visual supports help to increase sustained and selective attention, where this is necessary – for example for young children or situations where learners may be distracted. Some children meet the criteria for diagnosis of attention deficit hyperactivity disorder (ADHD) and will need increased support and adaptations to meet their needs. Attention skills, like all other skills, develop with successful learning experiences and practice over time.

Mental arithmetic difficulties are linked with working memory function although other factors have also been identified. It is recommended that alongside continuing to teach number skills, children's learning opportunities are widened with the means to overcome barriers, such as visual tools or using a calculator.

Teaching and learning activities that include visual supports (such as sign/ gesture, photos, pictures, numerals, letters, words and sentences, symbols), visual-spatial supports (such as grids, timetables, numeracy teaching equipment, films, storyboards, charts and other graphic organisers) and activities that allow learners to copy a model are recommended for supporting learning across the curriculum at present.

### **Fine and gross motor skills**

During their early years children show a specific delay in developing gross motor skills. They usually develop skills in a similar pattern to other children but more flexible ligaments present additional challenges. During the primary years motor skills improve considerably. Encouraging active movement and participation in PE is an important educational aim which will promote good health and valuable life skills. Pupils will make progress in developing their fine motor

skills for handwriting and drawing although most will need continued support for recording their work.

Some children have difficulties processing the information they receive from their senses and in coordinating their movements. They may perform precise movements more slowly, relying more on visual feedback than on proprioceptor or vestibular feedback to guide them.

### **Social inclusion**

Teachers will need to create the conditions in class for social inclusion and also help individuals to develop their social skills. There may be periods, usually short lived and in younger years, when children need additional planning and positive behaviour support, largely due to delayed development. For a minority of learners, skilled support is necessary for longer.

Outside of the classroom, children may need additional help as they learn to interact and play during break and playtimes, particularly as speech and language delay can make it more difficult for them to ask to join in or understand the rules of the game. However, any additional adult support given can act as a barrier to participation with peers and should be used sensitively and carefully.

### **Working with parents**

It is essential to maintain a good relationship with parents/carers so that everyone can work together to support children's learning. The school should ensure all staff have basic training about Down's syndrome and always use the correct person-first terminology. Maintaining regular contact with parents/carers is invaluable as they know their child better than anyone else. Teachers may also need communication from parents about how best to support health needs that affect learning – for example information about how to use glasses, support hearing, physical or sleep related concerns.

Although many parents come into school regularly, a home-school communication book is ideal as a way of communicating daily news and for highlighting successes. Many children have two types of home school communication book: one for communication between school practitioners and parents and a personal diary to support their communication. Providing a picture or drawing supported by a written sentence about an aspect of the day chosen by the child can aid communication about school experiences at home and when similarly completed at home, about out-of-school activities at school.

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