




Down Syndrome SA

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A Student with Down syndrome



Creating Opportunities

Understanding Down Syndrome

This fact sheet is intended to highlight some of the complex needs of the child/student with Down Syndrome. Be aware that there is a diverse range in ability among people with Down Syndrome and that each person is an unique individual.

Medical Concerns

Medical concerns impact on the learning and behaviour of the student with Down syndrome.

Duty of care will need to be considered in relationship to these issues. Check the impact of these conditions and develop a health care plan as required.

Hearing impairment

- Seat to optimise hearing eg near the front for lip reading, ear with better hearing to face the predominant sound
- Give 1:1 instruction

Visual impairment

- Seat centre front
- Use large clear print
- Impaired depth perception (stairs and playground)

Reduced immune system

- Frequent absenteeism
- May attend when unwell

Heart conditions

- Reduced stamina—plan excursions

High pain threshold

- Report and record accidents - child may not indicate severity of injury

Memory

Auditory (working memory) is impaired. Visual memory is a strength.

Short and long term memory difficulties...

- Use visual prompts and materials to support learning
- Establish routines
- Allow additional thinking time
- Break tasks into small steps
- Allow for repeated practice
- Revisit previously learnt skills regularly

Speech and Language

The student will understand more spoken language than they are able to say.

Articulation difficulties

- Ask the student to "slow down", "try again"
- Acknowledge that you have not understood

Retrieval of information is difficult...

- May need to allow up to fifteen seconds for a response....WAIT..... repeat exactly the same instruction
- When there is no response or inappropriate response, give correct response
- Give choices

May need to use other forms of communication

- Using signing, symbols (boardmaker), photos, etc
- Use technology eg 'Prologo 2 Go' on Ipad/ Ipod

Difficulty understanding questions...

- Use simple question forms, eg. "who", "what",
- Change more complex questions to a statement. E.g. Where did you go? You went to...?

Resources

These publications are available from the Down Syndrome SA

We recommend:

- Behaviour Management
- Behaviour Management (Secondary School Supplement)
- Teaching Drawing Skills
- Teaching Scissor Cutting Skills
- Teaching Prewriting Skills
- Reading, Getting Started
- Spell to Write
- Maths & Money
- Effective Teaching Strategies for Successful Inclusion (PREP)

Recommended Web Sites

http://downssa.asn.au	Down Syndrome South Australia
http://www.ds-health.com/	Health Care Issues
http://www.downsyn.com/	Health Care guidelines for individuals with Down syndrome
http://www.disability-resource.com	A journal/resource for families and others interested in Down syndrome and related disabilities
http://www.ndss.org/	National Down Syndrome Society (USA)
http://www.riverbendds.org	Riverbend Down Syndrome Parent Support Group
http://www.mosaicdownsyndrome.com/	Mosaic Down syndrome
http://www.ds.int.org	International organisation for Down syndrome
http://www.downs-syndrome.org	Portsmouth University research program about Down syndrome

Adapting instruction

Seating

To create a supportive work environment, make frequent use of group and peer activities requiring collaboration. Seat students together who are most likely to co-operate well and are least likely to antagonise or distract one another. Beware the 'motherers' and 'smotherers'.

Ensure that the student is seated where they can see and hear the teacher and the other students clearly.

Check that the student is seated in the optimal position for table work eg feet flat on the floor, elbows resting on the table.

Peer Assistance

Establish a classroom climate where students assisting each other with their work is encouraged and facilitated.

Establish guidelines for working with peers.

Involve the student in group activities by assigning them an achievable task that contributes to the group. During individual tasks, buddy the student with a peer to produce a joint product.

Use peers assistants to:

- read aloud
- check for comprehension
- scribe for the student
- locate a section of text
- check a student's work
- help the student to get started.

Personal Interests

Draw on personal interests and knowledge to support curriculum content. Parents will need to provide information about the student's interests, leisure pursuits and life experiences.

Praise

Use more frequent and descriptive praise eg. "I like the way you are drawing that square."

Rewards

Students respond well to rewards.

Rewards need to match the changing interests of the student eg stickers, appropriate touch (pat on the back), time at a favourite activity (blowing bubbles), give a valued job/ responsibility, time with a peer/ SSO, show work to peers/ staff/ principal.

Rewards need to be varied to maintain interest. Fade rewards as expectations are met.

Match the frequency and interest level of the reward to reflect the level of engagement and behaviour on a daily basis.

Using food as a reward is discouraged.

No one suggests that adapting curricula and instruction to individual needs is easy. However, effective teaching ... does require teachers to recognise individual differences among students and to make adjustments for these where possible.

*Adapted from: Commonsense Methods for Children with Special needs
P. Westwood, 1998, p193-195*

Fine and Gross Motor Skills

Low muscle tone ...

- Acknowledge the time and energy required to complete each task e.g. Eating, toileting

Shorter limbs and digits...

- Modify equipment and expectations

Difficulty planning a sequence of tasks...

- Break tasks into small steps with simple verbal cues with visual sequences
- Fade verbal cues with visuals
- Use visuals for independence

Reduce stamina ...

- Allow more time and build in small breaks

Behavioural Characteristics

Stubbornness is a result of

- Use distractions/humour
- Model, feel and do

Attending and concentration difficulties will vary daily

- Frequently change the pace, length and activity
- Use novelty

May have repetitive and ritualistic behaviour

- Seek advice on management of these behaviours
- Replace with more appropriate behaviour
- Define suitable time and place eg flick fingers—at recess time, not in the classroom

Intellectual Impairment

There are varying degrees of intellectual impairment. Each student is unique.

Asynchrony of development ie each child has strength and differences across different areas of development e.g. An 8 yr old may have 4yr old attainment in speech and 6 years in literacy

- Gather information across each area of development eg informal / formal assessment, from parents / SSOs, interpreting work samples.

Slower at and difficulty with processing information...

- Provide more structure by breaking tasks/instructions into small steps
- Minimise language of instruction e.g. go back, get your bag
- Allow more time for responses
- Support instructions with visual cues

May not be able to generalise a skill from one setting to another...

- Practise skills in different settings and with different personnel
- Regularly revisit learnt skills.
- Practise, practise, practise.

Learning styles

Visual learners

- Use visual materials and presentations
- Model the tasks, behaviours, speech

Experiential learners

- Use concrete materials
- Use real life experiences

'Failure avoidance' - Most students have a strong fear of failure and therefore may refuse to attempt tasks

- Model the tasks, behaviours, speech
- Increase positive reinforcement

Errorless Learners—will continue to repeat the same mistake

- Break tasks into small achievable steps
- Reinforce achievement of each step
- Use explicit teaching
- Skills learnt incorrectly will require considerable rehearsal to relearn that skill

Understanding Down Syndrome

Adapting instruction

<p>Attending</p>	<p>When giving general class instructions, use signs, visual and/or verbal prompts to gain the student's attention.</p> <p>When presenting tasks :</p> <ul style="list-style-type: none"> • break down instructions into steps. • ensure they are appropriate for the student's ability. • use concise, clear language • presentation must be simple and clear. • modify length • vary tasks • novelty aids attention <p>Reduce visual and auditory stimuli by using learning centres or withdrawal.</p>
<p>Demonstration and Modeling</p>	<p>Demonstrating and/or modeling of the task required will be required.</p> <p>Modeling maybe be provided by peer, assistants or teacher. Modeling needs to be repeated and gradually fade until independent.</p> <p>The task may need to be broken into small steps.</p> <p>Some students will initially need physical guidance (it feels like this) to be successful.</p> <p>The student will need individual instruction in addition to class instructions.</p>
<p>Waiting time</p>	<p>Teach thinking time, allowing extra processing and retrieval time.</p> <p>Wait for a response or students will become reliant on adult assistance and develop 'learned helplessness' eg when questioning allow a few seconds longer for a response.</p> <p>If necessary prompt by giving the student the beginning of the response sentence eg "Where did the train go?" – "The train went.....".</p>
<p>Revision</p>	<p>Build in frequent and regular revision of skills/content taught.</p> <p>More revision is essential for the student to retain and consolidate learnt skills.</p>
<p>Practice</p>	<p>Students need extensive opportunities to consolidate knowledge across a range of materials and settings.</p> <p>It may be necessary to give guided practice, prior to revising a skill.</p>
<p>Generalise</p>	<p>Students may not be able to use / choose to use new skills in different settings or with different people.</p> <p>Plan to generalise these skills to others settings.</p>
<p>Assistance</p>	<p>Direct support from the teacher, assistant or peer will need to be given to the student while learning new skill.</p> <p>Frequent feedback is required to motivate the student but as the student gains independence feedback and support must be faded.</p>

Adapting instruction

<p>Sensory</p>	<p>We all have a neurological need for stimulation. Be aware behaviour may be a reflection of sensory issues. Acknowledge the sensory issue as separate from behaviour.</p> <p>Under responsive—the student will generate their own feedback (often inappropriate)</p> <ul style="list-style-type: none"> • Substitute with socially appropriate behaviour in proximity to the inappropriate stimulation eg twirling/ pulling hair, substitute a headband <p>Over sensitive—e.g. To sound, texture, smell, touch, space</p> <ul style="list-style-type: none"> • When presenting tasks focus on using one sense at a time • Reduce the stimuli eg diminish noise by removing to a quiet spot or using headphones. Clothing labels/ seams cause significant distress.
<p>Work output</p>	<p>Teachers must have clear expectations of both the standard and quantity of work produced.</p> <p>Work output can vary from day to day and week to week reflecting health and stamina.</p> <p>Adjust the amount of work according to individual need but ensure that the adult controls the 'finishing' point eg 'one more then finished'</p> <p>Aim to increase the amount of work produced over time.</p>
<p>Activities</p>	<p>Modify activities to accommodate the ability and learning styles of the student.</p> <p>Consider the level, length and difficulty of the task. Break the task into smaller sections.</p> <p>Activities that incorporate concrete materials will increase motivation and attending.</p> <p>Independent work activities:</p> <ul style="list-style-type: none"> • need to be well known ie previously taught • must not require adult or peer intervention • physically accessible • motivating for the student <p>The whole process must be independent from accessing equipment to packing up when complete.</p>
<p>Texts and Resources</p>	<p>Reading materials and resources must reflect the student's life experiences and understanding.</p> <p>Be aware that comprehension levels do not keep pace with reading ability.</p> <p>Source materials from specialist resource centres eg SERU (Special Education Resource Unit), Nature Education Centre inc and previous teachers.</p>
<p>Response Mode</p>	<p>Students will not be able to demonstrate the depth of their knowledge using spoken or written language.</p> <p>Provide alternative forms or showing knowledge and understanding eg. multiple choice answers, utilise technology, demonstration, gesture, role play, drawing, symbols and signs.</p>