



Teaching Students with Down
Syndrome

Information series

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Dear Educator,

Welcome to the world of education and Down syndrome!

It is an exciting place to be, full of challenges and rewards. As you work with your student with Down syndrome you may find that you need more information or resources. CDSS has put together a package that we hope will be of some assistance this school year.

This package is just the "tip of the iceberg" of resource materials available to you about teaching students with Down syndrome.

Please enjoy the package and feel free to contact us or use the web site list to access more specific information. CDSS offers you direct access to a qualified Educational Consultant through our email contact at dsinfo@cdss.ca. This consultant will respond to your specific needs and questions as well as offer suggestions and materials.

Thank you for your support of individuals who have Down syndrome and good luck in your school year.

Carol Johnson
Resource Manager

I AM A CHILD WHO IS A STUDENT AND I HAVE DOWN SYNDROME

I am a child and you may want to know:

- è About my inherited traits
- è About my family
- è About my abilities
- è About my dreams and desires

I am a child with Down syndrome and you need to know:

- è About my Down syndrome
- è About my medical needs
- è About my physical condition
- è About my cognitive abilities
- è About my view of the world

è I am a student and you need to know:

- è I learn when I am taught properly
- è I learn who I am by being friends with others
- è I may need help some of the time but I don't need help all of the time
- è I will need time to process and practice new things
- è I will work as hard as I can when I am motivated
- è I am not stubborn
- è I take pride in my work and my achievements

è I am a student with Down syndrome and you need to know:

- è I like to be treated respectfully
- è I may not be able to tell you how I feel or why I feel, but I know what I am feeling.
- è I will be a capable adult if you treat me as a capable student
- è I have dreams, aspirations, perceptions and fears just as everyone else
- è Please do not judge everything I can and cannot do based upon my Down syndrome

Students with Down syndrome are capable learners who will progress with appropriate supports and opportunities.

FACTORS THAT CAN INFLUENCE A STUDENT'S EDUCATIONAL SUCCESS

Attitude is the most critical factor related to the success of student with Down syndrome. If you think a student will succeed, he will. When students are treated like valued learners, they learn. Everyone in a school is part of the inclusive learning environment, educators need to be willing to work as part of a team and be open to trying various methods of teaching and learning. Inclusion, like life, is a process and can be "messy" at time; don't be afraid to ask for help. Often peers have great ideas.

Medical concerns



When a student joins your classroom, read the cumulative file and talk to the parents about the student's medical history. Determine if there are any precautions or supports needed. If a student is taking medication, find out what it is and how it works. Some students may have chronic health needs, others will have occasional needs and most will be as healthy as any other student in your school. Health problems may appear differently in students with Down syndrome. For example, undiagnosed sleep apnea or celiac disease may cause irritable or resistant behavior or reduced attention span. Behaviours may have a medical/health basis rather than a cognitive or personality basis; health issues should be ruled out before attempting a behavioural approach.

Vision and hearing

- è Ensure that the student is seated where he can see and hear what is going on.
- è Watch for infection or irritation of ears or eyes.
- è If a student is resistant to wearing glasses, hearing aides, or fm devices reinforce usage for short periods of time throughout the day with a goal to full day use.
- è If a student uses an augmentative communication system, ensure you know how the system works and teach peers about that system.

- è If a student signs, learn basic signs and teach it to the class.
- è Some students may have a history of hearing loss, or may develop one. Watch for changes in behavior or learning and let the parents know.

Frequent upper respiratory infections

- è Frequent infections are common and they often impact learning.
- è A student may be absent more frequently or at increased risk of catching some "bugs".
- è Parents may send their child to school with a cold rather than missing more school.

Heart conditions

- è 40% of children with Down syndrome have congenital heart defects, which have been repaired. Most students will be able to participate in all activities without restrictions.
- è If a student has had recent surgery or is going to have surgery, teach about the condition and allow peers to learn how to be helpful to the student.

Cognitive challenges



Students with Down syndrome will benefit from the multi-modal approach both when learning or responding to material in the classroom. The visual and/or tactile approach at the students level has been shown to be of particular value to students with Down syndrome. Visual learners are able to envision things before they can write or talk about them.

Teaching concepts

- è Use verbal cues: songs, rhymes, mantras, key words, and repetitive phrases.
- è Use visual supports: visual schedules, photos, organizational charts, mnemonics, personal spellers, colour codes, manipulatives, subject tabs, diagrams
- è Chunk concepts and materials together.
- è Provide activities that relate to the ability and learning style of the student. This means reducing the level, length and/or the difficulty of the task
- è Ask questions that the student understands, using fewer words and speak slowly.
- è Select reading materials and other resources at the student's level of comprehension. Have the teacher-librarian locate materials to supplement topics being taught. Have parents or peers create materials. Design, purchase or borrow alternative materials.
- è Use the same accommodations for testing as used in teaching.
- è Use concrete materials based on real life experiences as "bridges" to more abstract learning activities.
- è Assign appropriate homework and reinforce completion as with peers.
- è Use rubrics to evaluate individualized learning goals and expectations.
- è Keep the student in the classroom if you are unsure of what to teach, s/he may surprise you.
- è Expect students to take tests, vary the content, assessment method and time.

Teaching routines

- è Establish routines and teach the student how to follow the routine; allow practice time and review often.

- è Break tasks into small steps and define each step.
- è Teach sequencing- first, second, third or first, middle, last.
- è Practice skills in different settings with different people.

Building relationships

- è Expect students to assist each other through reading aloud, co-writing a response, locating a section or text, checking work, helping to get started or working as part of a group.
- è Ensure all students have an opportunity to talk to each other and you during the day.
- è Expect and model respectful behavior.
- è Talk about, study and present information on Down syndrome.

Preventing Problems

- è Plan for transitions both within a subject area and between classes.
- è Use "offices" (cardboard tri-folds) to limit visual distractions.
- è Use head phones to limit auditory distractions.
- è Teach the student how to work "through" distractions and noise rather than sending out.
- è Give warnings about transitions.
- è A student may need time to respond...WAIT (5 at least sec) then repeat the same instruction.
- è While waiting do not give other instructions,
- è Look at what you want the student to do when giving directions.
- è Pair a preferred activity with a non-preferred activity.
- è Allow for repeated practice during the school day and at home.
- è Be positive and reinforce students for specific tasks; many students will work for positive recognition and affirmation from you.

Communication Difficulties



Communication consists of receptive knowledge, what is "inside" the student's head and expressive skills, how the student "tells". Many students will know far more than they can express. The goal of any communication program is to teach the student to communicate in whatever way works and to teach others how to engage in meaningful interactions.

- è If a student cannot tell you something, ask her to show you what is being discussed.
- è Use pictures, symbols or signs to communicate.
- è Teach peers how to use whatever communication system the student is using. If he signs, teach signing; if he uses a picture exchange system, teach it.
- è Ask the student to "slow down" and/or "try again" if you cannot understand him.
- è A student's communication challenges will not limit their ability to become whole word readers.
- è Comprehension scores may not be true indicators of what a student understands from reading as the expressive skills may not be strong enough to communicate the reading content.
- è Model appropriate communication strategies.
- è Use simple question forms i.e. Who, What, Where, and allow a few seconds longer for a response.
- è Prompt replies by giving the beginning of the response sentence e.g. "Where did the train go?" - "The train went....".
- è Allow the student to tape material and review at home with parental support.
- è Use alternative response methods such as drawing, acting (showing) selecting from multiple-choice answers or closed questions.

Sensory / Motor Difficulties



Some students may have difficulty processing information from many sources at once, doing more than one thing at a time or responding quickly in some situations. They may shut down, become excited or act out when their senses are not working together properly. Some students look "stubborn" when they are experiencing sensory or motor planning difficulties.

- è Focus on using one sense at a time or completing one task at a time. I.e. listening and taking notes at the same time.
- è Look at the student to give directions, look away while s/he is processing the request.
- è Noise, light and activity may be distracting. Provide seating and quiet spaces that any student may use.
- è If a student reacts to some textures, acknowledge the sensitivity. Take a break, try again or find an alternative.
- è A student may not be able to sit on the floor without back support; use a chair, pillow or prop.
- è Uneven surfaces may be difficult to navigate, allow the student to practice walking on these surfaces.
- è Teach calming or alerting strategies based on the student's needs.
- è Ensure the student is seated in a desk that is the right size; feet should be supported, elbows at a 45-degree angle from the desktop and the back supported.
- è Encourage the student to sit with legs in front. Sitting in the "V" position or sitting with legs crossed on the thighs loosens the hips joints.

è Use adapted supports for zippers (add a pull), pencils (larger barrels, add grips), scissors or

other fine motor activities.

Socialization





















We learn how to be part of our world and community by living, learning and laughing with others. Students need to spend time together to learn how to live together now and in the future. Academics are one part of why students attend school. Learning how to be human is the unwritten curriculum that permeates everyone's learning. Inclusive learning experiences teach people how to respect and learn from each other. By being included every day in a classroom a student with Down syndrome learns what it means to be a full member of a school community and visa versa.

- è Expect all students and staff to treat each other with respect.
- è Teach everyone how to "get along" with each other using modelling, coaching, stories, real life situations and practice sessions.
- è Teach names of staff and peers using photos.
- è Model respectful behavior and use people first language i.e. "a student *with* Down syndrome" rather than a "Downs student".
- è Teach about Down syndrome; invite guest speakers, read books that includes a person with Down syndrome.
- è Create opportunities in the class or school that ensures everyone works toward a common goal. The jobs may be different but the goal is the same.
- è Teach students to work together in groups, as peer tutors or to collaborate on projects, include various learning styles and expectations within the group.
- è Teach and support friendship skills within the classroom. Use the recess and lunch breaks to practice these skills.
- è Facilitate cooperative games and social games that build relationships.
- è Teach about feelings and emotions; give suggestions for what to do when you feel a certain way.
- è Teach how to make choices, give opportunities for making choices and reinforce "good" choice making.
- è Use peers to provide support, or give you ideas when you are unsure. They often know a great deal about the student.

Download Accommodation Checklist for more information.

EDUCATIONAL WEBSITES OF INTEREST

-  www.cdss.ca
Comprehensive site with links to groups across Canada. Order books online. Email questions to our information line for research and response by qualified staff.
-  www.sped.org/
Comprehensive website dedicated to students with disabilities, and/or the gifted.
-  www.inclusion.com
Site dedicated to inclusive practices.
-  www.bced.gov.bc.ca/specialed/sid/
Practical information for teachers, including case studies and links.
-  www.seriweb.com
Large site that covers a wide range of information related to disability and inclusion.
-  www.downsed.org
Large UK site with educational links.
-  www.bvcroarc.org/learningweb
Designed for people with developmental disabilities which provide lessons in basic literacy.
-  <http://www.altonweb.com/cs/downsyndrome/>
Extensive information on this US site.
-  www.kidstogether.org
An energetic and informative American site that focuses on inclusive practices.
-  www.disabilitysolutions.com
Educational material that can be down loaded for free.
-  www.InclusionDaily.com
A daily news bulletin dedicated to disability and inclusion issues.
-  www.mothersfromhell2.org
An American advocacy site with an “attitude”, great ideas for parents dealing with resistant school systems.
-  www.knowyourrights.ca
A Canadian site related to advocating for your child within the school system.
-  www.daviesandjohnson.com
Site dedicated to adapted lesson units to support Canadian curriculum content from elementary to high school.
-  www.prepprog.org
The PREP Program is a school and resource center that serves individuals with Down syndrome.
-  www.dsrp.org
Comprehensive Canadian research and resource site.
-  www.downsasa.asn.au
A Large Australian site with excellent information and resources.
-  www.peak.org
English and Spanish information on curriculum.



www.trisomie.gc.ca

French language site.



www.nclid.unco.edu/hvoriginals/advocacy/popup/popup

A fun site with great responses to comments that arise when planning for a student.



www.inclusive-education.ca

An excellent site for information related to inclusion, advocacy, testing and rights issues.



www.inclusionseries.com

Site dedicated to inclusion issues with material for educators and parents.

RESEARCH ARTICLES OF INTEREST

BUILDING ON SIMILARITY: A WHOLE CLASS USE FOR SIMPLIFIED LANGUAGE MATERIALS

By: Jonathan Rix,

Westminster Studies in Education, V. 27, #1, Apr. 2004

To purchase article go to: <http://journalsonline.tandf.co.uk/app/home/main.asp>

This article examines how the teaching strategies for students with Down syndrome may be useful for other people within the educational system. The author states that there is considerable evidence that people with Down syndrome do better with the use of simplified learning materials (SLM), which focuses on shorter, simpler sentence structures.

The Education of individuals with Down Syndrome: A review of educational provision and outcomes in the United Kingdom, Professor Sue Buckley

To download this report, go to: www.downsed.org/research/projects/reports/2000/education

A 1999 report of research conducted by the Down Syndrome Educational Trust in collaboration with the University of Portsmouth over a fifteen-year period found no educational benefits of special school education. On all measures, the students with Down syndrome educated in mainstream schools were either equal or significantly ahead of their special school peers with Down syndrome.

Reading, language and memory skills: A comparative longitudinal study of children with Down syndrome and their mainstream peers.

Angela Bryce, John MacDonald, Sue Buckley

Source: British Journal of Educational Psychology (2002), 72, p.513-529

For copies of the study contact: sue.buckley@downsed.org

This study examines how children with Down syndrome learn to read and found that they had relatively advanced single word reading ability compared with their other cognitive skills. The results indicated that most children with Down syndrome are capable of learning to read single words but there was not evidence to support the hypothesis that learning to read will enhance language and memory development in children with Down syndrome.