



Tips for Educating Children with Down syndrome

Down syndrome is the most common occurring chromosomal abnormality. The human cell is comprised of 46 chromosomes. Dr. Langdon Down is credited with discovering that a 47th chromosome is present in individuals diagnosed with Down syndrome. Characteristics of Down syndrome vary greatly from individual to individual. There are some physical characteristics commonly associated with Down syndrome along with a higher incidence of certain health issues and some degree of cognitive delay. Down syndrome was named after Dr. Langdon Down.

Educating Children with Down syndrome:

- The overall priority should be no different than that given to the education of any child:
 - development of new skills
 - learning of appropriate behavior
 - the greatest degree of independence

Best Practices:

IDEA 2004 states: "Almost 30 years of research and experience has demonstrated that the education of children with disabilities can be made more effective by having high expectations for such children and ensuring their access to the general education curriculum in the regular classroom, to the maximum extent possible, in order to meet developmental goals and, to the maximum extent possible, the challenging expectations that have been established for all children; and (ii) be prepared to lead productive and independent adult lives....."

There is expanding body of research that supports the best practice in education of including students with Down syndrome in the general education classroom for core curriculum as well as special course such as art and music. This is accomplished only through the collaborative efforts of the family, school, and students and with appropriate supports. The tips suggested in this document are intended for use in the general education setting to the maximum extent possible.

Common learning problems that may be seen in children with Down syndrome:

Remember each child is unique. This doesn't mean that all children with Down syndrome will have these issues. You will note that many of these are common in all populations.

- **Brief attention span and are easily distracted**
 - Educators can minimize this problem by eliminating potential distractions such as unnecessary decorations or complex handouts.
 - Use of signals such as hand gestures or sign language.
 - Visual cues and social stories – small cue cards, can be developed and used to regain the attention of the child without causing disruption to other students.
 - Learning what the child finds interesting or enjoyable and focusing lessons around these points can also help in retaining attention.
 - Small group projects.
- **Many of the intellectual challenges experienced by children with Down syndrome stem from memory problems.**
 - Difficulties in the retention and application of information seriously affect the learning process.
 - Presenting information in small increments and focusing study strategies around repetition and rehearsal of learned information.
 - Using projects, characters, stories, etc that are meaningful to the child to relate information to the child.
 - Consistency of practices at home and at school.
- **Speech Language issues**
 - Varying levels of speech and language delays including delayed language development, articulation and fluency.
 - Educators must be prepared to adjust subject matter and presentation to meet the needs of the child. In severe cases of limited expressive abilities, non-verbal responses achieved through sign language, hand gestures, symbols or computer, should be encouraged.
 - Children often become very frustrated when unable to communicate effectively. Patience is critical.
 - Promoting increased listening skills while demonstrating appropriate communication can help children improve their speech and language.
 - Speech problems are sometimes directly linked to hearing deficiencies. When educating children with hearing impairments, visual aides have been found invaluable. Children with Down syndrome should have regular hearing checks to determine if this is linked to language delays.
 - Projectors, hand-outs, and pictures can provide key points in a lesson, as well as help a child maintain focus.

- **Visual**
 - Many individuals with Down syndrome have vision problems usually correctable with glasses. Children with Down syndrome should have annual visual exams.
 - Visual perception issues may require preferential seating, enlarged work, and other accommodations.
- **Fine Motor Issues**
 - Children with Down syndrome may have low muscle tone, decreased strength and joint ligament laxity.
 - Practically speaking, children with Down syndrome may have smaller hands and low muscle tone which creates fine motor issues in writing and self-help skills.
 - Physical adaptations may be needed for optimal performance (desk size, etc.)
 - Sensory issues such as squeezing too hard or not hard enough.
- ***Research has shown integrating occupational and speech therapies into the classroom setting has been shown to be highly effective for students with Down syndrome and other developmental disabilities.***
 - **Appropriate social interaction can be strengthened by allowing children to work together with other students of varying academic ability.**
 - Not only can a child with Down syndrome learn a great deal from peer example, but can also offer a different perspective to others. Working with other students in areas they have mastered can give all children a sense of usefulness, independence and belonging, critical to human social growth.
 - Educating classmates and their parents about Down syndrome by inviting the child's parent or someone from the Down Syndrome Association to speak to the class.
- **Miscellaneous**
 - Children with Down syndrome should also be included in extra-curricular and special activities such as clubs, accelerated reading programs, field days, etc.
 - Physical activity is very important to all children. Children with Down syndrome are no different and all efforts should be made to include them in physical activities.
- **Common Accommodations/ Modifications**
 - Shorter lessons
 - Re-takes on tests
 - Hands-on modeling
 - Enlarged lessons

- Extended time to complete assignments
- Assignments sent home for completion
- Providing books/ workbooks at home
- Homework and work assignments given to families early
- Assistant to take notes and assist with organization
- **Peer modeling and tutoring**
- Computer for writing
- Alternate handwriting methods such as Handwriting Without Tears
- Equipment modifications such as a modified chair (example – chair with a foot rest), non-traditional paper with wider lines, highlighted paper, etc.

Resources available through the Down Syndrome Association of the Mid-South:

Books that may be beneficial to teachers/ parents of children with Down syndrome:

“Teaching Math to People with Down Syndrome and other Hands-On-Learners”

— by DeAnna Horstmeier

“Teaching Reading to Children with Down Syndrome” — A Guide for Parents and Teachers by Patricia Logan Oelwein

“Classroom Language Skills for Children with Down Syndrome” by Libby Kumin

“Everyone Counts” Curriculum with video and games to teach classmates about Down syndrome pamphlet.

Other selected books to read to children:

“I Can, Can You?” By Marjorie W. Pitzer (ages birth to 4)

“**My Friend Isabelle**” by Eliza Woloson is for children ages 2 to 6 and is the companion to Everyone Counts! A program and teacher's packet is available to accompany.

“**We’ll Paint the Octopus Red**” by Stephanie Stuve-Bodeen (ages 3 to 7)

“**The Best Worst Brother**” by Stephanie Stuve-Bodeen (ages 4 to 8)

“**What’s Wrong with Timmy?**” By Maria Shriver (grades 2 through 5t)

The Down Syndrome Association of the Mid-South has the mission of supporting and empowering people with Down syndrome and their families. DSAM has professionals and parents available to speak to school-aged audiences as well as classes for those preparing to teach and in-service training.