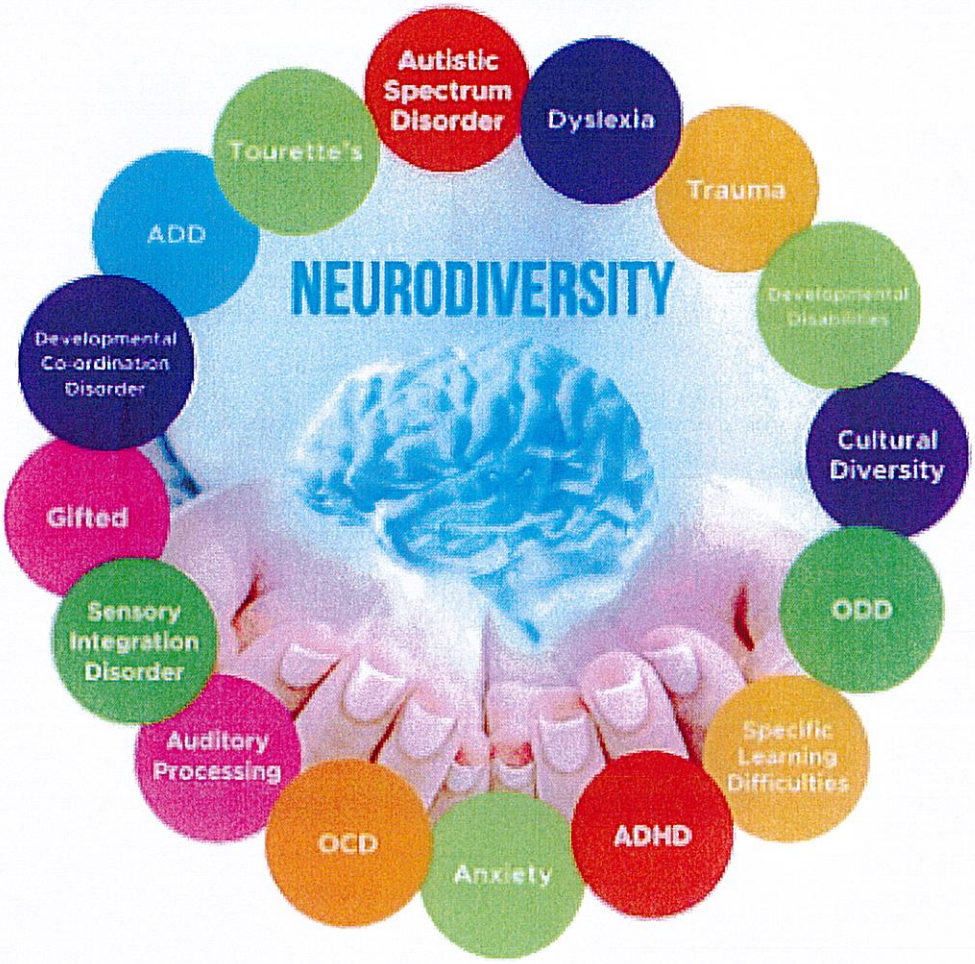

NEURODIVERSITY
Autistic Spectrum Disorder
Dyslexia
Trauma
Developmental Disabilities
Cultural Diversity
ODD
Specific Learning Difficulties
ADHD
Anxiety
OCD
Auditory Processing
Sensory Integration Disorder
Gifted
Developmental Co-ordination Disorder
ADD
Tourette's

ADHD Fact Sheet

ADHD is...

- ✓ **An abbreviation** for attention-deficit hyperactivity disorder. It's also the official name for what is sometimes referred to as attention-deficit disorder (ADD).
- ✓ **A common disorder** that can impact focus, impulse control and emotional responses.
- ✓ **Often diagnosed in childhood** but sometimes not until the teen years or later.

ADHD is *not*...

- ⊗ **All about hyperactivity.** Kids with the inattentive type of ADHD may appear "daydreamy" or off in their own world.
- ⊗ **A problem of laziness.** ADHD is caused by differences in brain anatomy and wiring.
- ⊗ **Something most kids totally outgrow.** Many kids diagnosed with ADHD have symptoms that persist into adulthood.

Kids with ADHD may have trouble with...

- Getting and staying organized
- Managing emotions
- Following directions
- Managing time
- Shifting focus from one thing to another
- Focusing on what's important
- Getting started on tasks
- Thinking before saying or doing things
- Keeping things in mind (working memory)

Ways to help kids with ADHD

Behavior therapy can help kids get organized and replace negative behaviors with positive ones.

ADHD medication can reduce ADHD symptoms, but only when the medication is active in the body.

Classroom accommodations, like taking movement breaks and getting extended time on tests, can help with things like staying seated and finishing tasks.

Success stories

Will.i.am, Grammy-winning singer and producer

Lisa Ling, Award-winning TV journalist

David Neeleman, Founder of JetBlue Airways

Understood

For more information on ADHD and how to help, go to [illegible].org/adhd

Classroom Accommodations to Help Students With ADHD

What classroom accommodations can help students with ADHD? Here are some things teachers can try.

for Classroom Learning

- Have student sit close to the teacher and away from windows and doors.
- Increase space between desks.
- Have teacher stand near student when teaching.
- Provide foot rests, seat cushions or resistance bands on chair legs to help satisfy need to move and improve focus.

for Organization

- Use assignment notebook.
- Provide an extra set of books to keep at home.
- Provide folders and baskets of supplies to keep desk organized.
- Color-code materials for each subject.
- Provide written schedule for daily routines.

for Classwork and Taking Tests

- Provide worksheets with fewer questions and problems.
- Give frequent short quizzes, rather than one long test for each unit of work the teacher goes over.
- Give extra time and quieter space for work and tests.
- Allow student to answer questions out loud, or fill in the blanks.
- Allow word processing on computer.
- Give credit for work done instead of just taking away points for late or partial assignments.
- Break long assignments into smaller chunks.
- Don't grade for neatness.

for In-Class Learning

- Give directions out loud and in writing.
- Use pictures and graphs.
- Have a buddy take notes for the student.
- Give the student the lesson outline.
- Check to make sure the student understands the lesson.
- Keep instructions simple and clear.
- Create a "signal" to get the student's attention. This could be a sticky note on the desk or a hand on a shoulder.

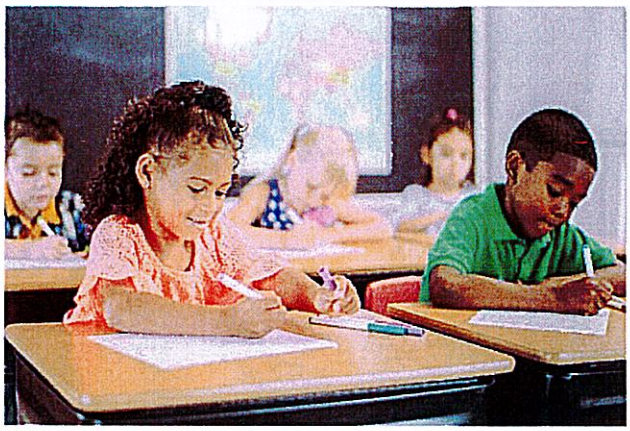
for Behavior

- Use a behavior plan with a reward system.
- Praise good behavior. Ignore other behavior as long as it isn't disruptive.
- Talk through behavior problems one-on-one.
- Monitor frustration. Check in with student to understand his mood.

Tips for Educators

Providing Classroom Accommodations to Help Students with ADHD

Accommodations are intended to help students with ADHD learn the same information as other students. They are changes to the structures and/or the environment that provide support to help students access the curriculum. Accommodations work best when they are tailored for the individual needs of the student based on the severity and symptoms of their ADHD and any other co-occurring conditions. It is important to observe the student to see which accommodations are effective – and effectiveness of accom-



modations can change over time. Students can also be enlisted in figuring out what helps them the most. This will also ensure that the accommodations are seen as support instead of punishment. Teachers, parents, and students should partner together to address needs and supports.

The *Diagnostic and Statistical Manual, Fifth Edition* lists two categories of symptoms of ADHD—inattentive and hyperactive-impulsive. Students may have only one type, or they may have both types of symptoms. The accommodations that are appropriate for each student depend on the symptoms and on how much they impact the student.

ADHD: Inattentive Symptoms

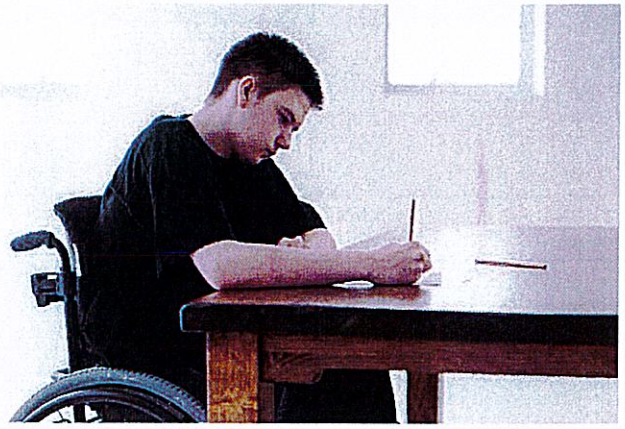
Students with inattentive symptoms are easily distracted and have trouble focusing. Everything competes for their attention. They often struggle to follow through with instructions and have difficulty with organization.

To help students with managing inattentive symptoms, the following accommodations can be effective:

- Seating the student in an area with fewer distractions where he or she can focus on the lesson. For example, near the teacher's desk, away from windows and the doorway, or in another area that has few distractions.
- Seating the student next to positive role models, peers who are less likely to provide

distractions and can help them stay on task.

- Breaking long assignments into smaller parts. This allows students to see both the start and end of the task.
- Making sure all assignments are clear and provided in writing in addition to giving them out loud.
- Checking with the student before they complete an assignment to see if they heard and understood instructions. Ask them to repeat it back to verify understanding.
- Allowing them to take tests in a different room, one that is quiet and has few distractions. Or using aids such as headphones or privacy boards to create quiet spaces in the classroom.
- Giving more time to complete assignments, projects, and tests.
- Using a timer or alarm to help with time management.
- Providing breaks. Depending on the student, these could include stretching, walking to the board to complete a task, or handing out assignments or materials.
- Limiting repetitive assignments, particularly those the students has already mastered, or tasks that are too far above the student's level. Students are most able to pay attention to tasks that present some challenge but are within their current learning zone.
- Making sure that the student has the opportunity for physical activities because active movement increases the ability to focus. Recess should never be taken away as a punishment for misbehavior.
- Providing tools to help with organization, such as different colored folders, a notebook with dividers, or a homework assignment book.



- Using computers or tablets for work. Computers are visually stimulating and allow for more engagement and also help students organize their thoughts.

ADHD: Hyperactive-Impulsive Symptoms

Students with hyperactive-impulsive symptoms move a lot. They fidget, squirm, and have difficulty staying seated. They often talk excessively, blurt out answers, and have trouble taking turns.

To help students manage their hyperactive-impulsive symptoms, the following accommodations can be effective:

- Seating the student in an area of the room where there will be the least disruption. This might be towards either side of the classroom rather than the center.
- Allowing for the student to move around. You could allow the student to do their work while standing, sitting on the floor, or moving between desks.

Sample Behaviors	Accommodations
Constantly moving in their seat	Try giving them options for how they can do their work and provide breaks.
Attention wavers, but when focused blurts out answers	Try consistent praise for raising their hands and seating them in an area with minimal distractions.
Has trouble completing assignments and tests in the allotted time because of distractions	Try an alternative test setting or breaking up assignments and tests into smaller sections. Allow extra time to complete tests.
Taps a pen constantly that is distracting to other students	Let the student know privately that tapping their pen is a distraction. Ask them if they have other suggestion for how they could focus. You might offer that they could wave their pen in the air, wiggle it between their fingers, or replace the pen with a soft object to tap that won't make noise.

- Pairing the student with a peer who is a good role model and can model appropriate behavior.
- Providing activity breaks. Depending on the student, these could include stretching, walking to the board to complete a task, or handing out assignments or materials.
- Ignoring minor misbehavior.
- Allowing the student to move or fidget in a non-distracting manner. They might tap their foot in the air or rotate their pen back and forth in their hands. Asking the student to offer suggestions is always a great way to get more ideas.
- Allowing them to take tests in a different room. One that is quiet, has few distractions, and lets them move around without interrupting other students.
- Praising when they exhibit appropriate behavior such as raising their hands and waiting to be called.
- Limiting repetitive assignments, particularly those the students has already mastered, or tasks that are too far above the student's level. Fidgeting is often a symptom of boredom or overstimulation.

- Making sure that the student has the opportunity for physical activities. Recess should never be taken away as a punishment for misbehavior.
- Using a speaking stick or other object that gets passed around during class discussions as a cue to indicate whose turn it is to speak.

ADHD: combined symptoms

Many students with ADHD show a combination of inattention and hyperactive-impulsive behaviors. You can use a combination of accommodations from both lists. One of the best ways to identify which accommodations might work best is to observe the student's natural behavior.

Help with social challenges

Besides creating academic challenges, ADHD also affects social skills. Student may have trouble controlling their emotions, and younger kids especially may have difficulty keeping their hands to themselves. They might not interpret social cues effectively. They could also struggle with conversational skills. These challenges often cause students with ADHD to have difficulty making and keeping friends.

As a teacher, you can help by providing a positive learning environment. You can also teach, show, and support appropriate behavior in the following ways:

- Praise the student for good behavior more often than punishing for bad. Give encouragement and reassurance. Let the student hear they are succeeding. Frequent but brief feedback that lets the student know they are on the right track is often very effective.
- Work with students to set up a private signal, either visually or verbally, to help them recognize when their behavior is bordering on inappropriate. When prompting behavior you want it to be a reminder rather than a reprimand.
- Promote self-awareness. Ask students to describe the problem or issue they are having. Ask them why they think it is happening and how they can change their behavior.
- Give opportunities for group or paired learning. The opportunities provide a structured setting for students to interact with classmates.
- Provide opportunities for other students to see them in a positive light. You might ask the student to help you with a task or give him or her a leadership role in the classroom for a day—anything to help the student feel connected to the classroom and the school.

Provide feedback in one-on-one settings. Not only do you preserve self-esteem by providing feedback privately, but you also can help reinforce positive behavior and have the student practice having a conversation with you to improve social skills.

References

Barkley, R. (2008). Classroom Accommodations for Children with ADHD. *ADHD Report.*

Dendy, C., Durheim, M., & Ellison, A. (2006). *CHADD Educator's Manual.* Lynchburg, VA: Progress Printing.

Parker, H. (2012). Accommodations Help Students with Attention Deficit Disorders. A.D.D. WareHouse.

Zentall, S. (2006). *ADHD and Education Foundations, Characteristics, Methods, and Collaboration.* Upper Saddle River, NJ: Pearson Education.

Chaban, P., McAuley, T., & Tannock, R. (2009). ADHD and Social-Emotional Abilities. www.AboutKidsHealth.ca.

For further information, please contact:
National Resource Center on ADHD:
A Program of CHADD
4601 Presidents Drive, Suite 300
Lanham, MD 20706-4832
1-800-233-4050
www.chadd.org/nrc

CHADD®

This factsheet is supported by Cooperative Agreement Number NU38DD005376 from the Centers for Disease Control and Prevention (CDC). The contents are solely the responsibility of the authors and do not necessarily represent the official views of CDC.

What is autism?

Autism is a lifelong disability which affects how people communicate and interact with the world. There are approximately 140,000 autistic school children in the UK.[1]

Communication challenges

Needing time to process information

Difficulty with unexpected change

Even small changes can cause huge anxiety

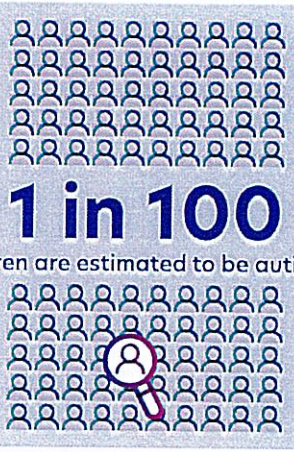
This can lead to meltdowns or shutdowns

Sensory differences

Noise, smells and lights can be very overwhelming

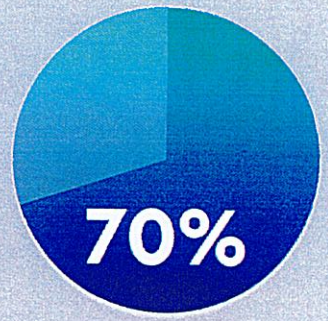
Repeating things and routines

Taking the exact same route to school or liking the same food

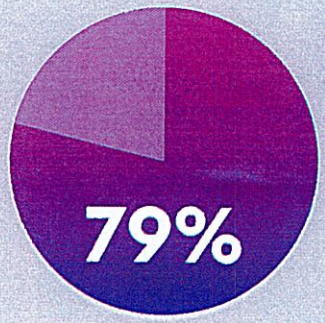


1 in 100

children are estimated to be autistic.[2]



of autistic children are in schools like yours.[3]



of autistic people report feeling isolated.[4]

Autistic children are

3 times

more likely to be excluded from schools like yours.[5]

Well-known autistic people

Chris Packham

Anne Hegerty

Talia Grant

World Autism Awareness Week 2021

29 March - 4 April

"If you see anyone having a meltdown, be calm and understanding and give them the space to calm down."

Talia Grant

Help create a society that works for autistic people.

Schools activity for World Autism Awareness Week, kindly sponsored by Axcis Education

Sources

1. The NHS Information Centre, Community and Mental Health Team, Brugha, T. et al (2012). **Estimating the prevalence of autism spectrum conditions in adults: extending the 2007 Adult Psychiatric Morbidity Survey.** Leeds: NHS Information Centre for Health and Social Care

2. The NHS Information Centre, Community and Mental Health Team, Brugha, T. et al (2012). **Estimating the prevalence of autism spectrum conditions in adults: extending the 2007 Adult Psychiatric Morbidity Survey.** Leeds: NHS Information Centre for Health and Social Care

3. DfE Special educational needs in England: January 2014

   70% of autistic children are in mainstream school

4. The National Autistic Society Survey (2015)

5. Department for Education (July 2018), Permanent and fixed-period exclusions in England: 2016 to 2017

   70% of autistic children are in mainstream school, and are 3 times more likely to be excluded from them

World Autism Awareness Week 2021 29 March - 4 April

Building Our Future EDUCATING STUDENTS ON THE SPECTRUM

ACKNOWLEDGEMENTS:
The Autism Society wishes to thank the following professionals for their contributions to the content of this booklet:

Margaret Creedon, Ph.D., *Easter Seal Therapeutic Day School*

Andrew Egel, Ph.D., *Professor of Education, University of Maryland*

David L. Holmes, Ph.D., *President/Executive Director, Eden Family of Services*

Gary B. Mesibov, Ph.D., *Director/Professor, Division TEACCH, University of North Carolina*

Cathy L. Pratt, Ph.D., Director, *Indiana Resource Center for Autism*

Frank Robbins, Ph.D., Director, *Quabbin Valley Educational Consultants*

Eric Schopler, Ph.D., *Founder/Professor, Division TEACCH, University of North Carolina*

Many educational approaches can significantly improve the quality of life of persons on the autism spectrum and their families.

WHAT IS AUTISM?

Autism is a neurological disorder that disrupts a child's learning and socialization. Deriving its name from the Greek word for "self," autism is often associated with children who seem self-absorbed and exhibit unusual behaviors. It is a spectrum disorder, meaning that any two people diagnosed with autism may have very different symptoms and/or characteristics. Children with the disorder range from very high-functioning (nearly indistinguishable from children who do not have autism) to profoundly impaired. Some students diagnosed with autism may have other diagnoses, such as Asperger's Disorder or Pervasive Developmental Disorder - Not Otherwise Specified (PDD-NOS). More information about these diagnoses can be found on the web site of the Autism Society at www.autism-society.org.

Autism is the third most common developmental disability, following mental retardation and cerebral palsy; it is four times more prevalent in boys than in girls. The Centers

MANY EDUCATIONAL APPROACHES CAN SIGNIFICANTLY IMPROVE THE QUALITY OF LIFE OF PERSONS ON THE AUTISM SPECTRUM AND THEIR FAMILIES.

AUTISM CHECKLIST

- ❑ Insistence on sameness; resists changes in routine
- ❑ Severe language deficits
- ❑ Difficulty in expressing needs; uses gestures or pointing instead of words
- ❑ Echolalia (repeating words or phrases in place of normal, responsive language)
- ❑ Laughing, crying, or showing distress for reasons not apparent to others
- ❑ Prefers to be alone; aloof in manner
- ❑ Tantrums; displays extreme distress for no apparent reason
- ❑ Difficulty in mixing with others
- ❑ May not want to be touched or may not be physically affectionate
- ❑ Little or no eye contact
- ❑ Unresponsive to standard teaching methods
- ❑ Sustained odd play
- ❑ Spins objects
- ❑ Inappropriate attachment to objects
- ❑ Apparent oversensitivity or undersensitivity to pain
- ❑ No real fear of dangers
- ❑ Noticeable physical overactivity or extreme underactivity
- ❑ Not responsive to verbal cues; acts as if deaf even though hearing tests in normal range
- ❑ Uneven gross/fine motor skills (may not kick a ball, but can stack blocks)

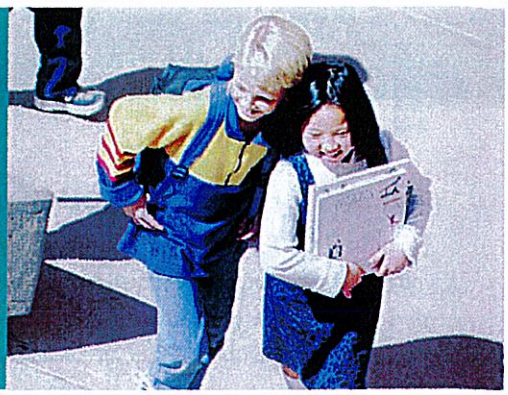
Please note this symptom list is not a substitute for a full-scale diagnostic assessment.

for Disease Control and Prevention now estimates that one in every 175 children born in the U.S. today will fall somewhere on the autism spectrum. It is estimated that 1,500,000 people in the U.S. today have autism.

Autism is usually diagnosed during the first three years of a child's life. There is no medical test for autism; a diagnosis is determined by a team of professionals through observation and testing of the child, coupled with interviews with parents or guardians. This diagnostic team may include a neurologist, psychologist, developmental pediatrician, speech/language pathologist, and/or other professionals knowledgeable about autism. The team's findings are then compared to the definitive protocol for assigning a diagnosis of autism as set forth in the DSMIV-TR (Diagnostic and Statistical Manual for Mental Disorders Fourth Edition Text Revision), published by the American Psychiatric Association. For a diagnosis to be made, a child must exhibit some symptoms in all of the three following categories, although the level of severity can vary greatly:

1. **Qualitative impairments in social interaction.**
   Students with autism may have great difficulty developing peer relationships appropriate to their developmental level. Many may have difficulties understanding social cues or rules, participating in community or leisure activities, or relating to others.
2. **Qualitative impairments in communication.**
   Students with autism may have difficulty understanding spoken language or reading "nonverbal" communications, such as facial expressions or gestures. Some speak in odd or unconventional ways.
3. **Restrictive, repetitive, and stereotyped patterns of behavior, interests, and activities.**
   Students with autism may have unusual preoccupations, odd or repetitive motor mannerisms, and/or restricted patterns of interest that are abnormal in either intensity or focus. Difficulty in processing sensory input may cause some of these children to have unusual reactions to sounds, sights, touch, or smells.

ALTHOUGH CHILDREN WITH AUTISM ARE OFTEN DESCRIBED AS BEING "ALOOF" OR "SELF-ABSORBED," MANY OF THEM WOULD LIKE TO HAVE FRIENDS.



Frequently, children with ASDs exhibit uneven development in cognitive, communications, social, adaptive, and motor skills. Sometimes significant strengths in isolated skills are coupled with significant deficits in others. Like other children, they respond to their environment in positive and negative ways. Although autism may affect their range of responses and may make it more difficult to control how their body and mind react to everyday situations, people with ASD live normal life spans and certain associated behaviors may change or disappear over time. Other disorders can coexist with autism, such as seizure disorders, mental retardation, or obsessive-compulsive disorder.

Scientists and researchers are exploring a number of theories regarding the causes of autism. Unfortunately, to date, no single cause or cure has been identified.

WHAT AUTISM IS NOT

Contrary to popular belief, some children and adults with autism do express affection, smile and laugh, and show a variety of other emotions, but in varying degrees. Although children with ASD are often described as being "aloof' or "self-absorbed," many of them would like to have friends. However, the very nature of their disability makes it difficult for them to establish or maintain the basic peer relationships that ultimately develop into friendships.

- Autism is not the result of poor parenting
- Children with autism are not unruly or spoiled kids with just a behavior problem
- The vast majority of persons with autism are not savants, like the character portrayed by Dustin Hoffman in the movie *Rain Man*
- Children with autism are not without feelings and emotions

DIFFERENCES AMONG CHILDREN WITH AUTISM

The most notable differences among children with ASD involve their use of language to communicate. Higher functioning individuals, including those diagnosed with Asperger's Disorder, are able to communicate quite well verbally (although sometimes they may speak or use language in odd or peculiar ways). Others talk very sparingly, and some never speak. Those without spoken language will often use a picture-based communication system or some other augmentative communication device to help in expressing themselves. The inability to communicate effectively or to understand conventional communication can become a significant barrier to a child's ability to learn and to adapt to community settings.

Some students with ASD are quiet and passive, while others may be hyperactive and/or insistent. Most will require strict adherence to schedules and routines, although a few will accept changes without incident.

The interpretation of sensory "input can vary greatly among children with autism. They may be hypersensitive to sounds or touch, have an unusually high threshold for pain, or perhaps crave constant, deep pressure. Most will exhibit unusual behaviors, but these will differ from individual to individual. For instance, one child may do odd things with her eyes, while another child may rock his body or repeat the same words or phrases over and over.

AUTISM AND INTELLIGENCE

Tests of adaptability and intelligence indicate that many children with autism have some level of mental retardation. Despite this, some people with autism have average to above average intelligence. A few have superior IQs.

INDIVIDUALS WITH DISABILITIES EDUCATION ACT

The Individuals with Disabilities Education Act (IDEA) ensures that all children with disabilities receive a free, appropriate public education in the least restrictive environment, tailored to each child's individual needs. This law guarantees all children, regardless of their abilities, the right to obtain educational benefits from their educational setting.

As autism affects approximately 1,500,000 individuals in the U.S., and proper implementation of this law is of utmost importance to many families and to the education community at large. For children with autism, it is particularly important to provide opportunities to learn through a variety of educational options - from typical school settings to more specialized settings.

THE INDIVIDUALIZED EDUCATION PROGRAM

No matter the level of disability, the educational program for an individual with autism must be based on the unique needs of that person. To help determine what sort of learning environment would be best for a person with autism, an Individualized Education Program (IEP) should be developed. In the IEP, a collaborative team that includes the classroom teacher, other professionals who work with the child, administrators and the child's parents or guardians set forth the educational goals, objectives, and evaluation standards for the child. Clearly stated, measurable goals to chart the child's progress are a vital component of the IEP, which is reviewed annually or more frequently, if necessary.

All areas of the student's development should be addressed specifically in the IEP, including academic achievement, social and adaptive behavioral goals, and development of fine and gross motor skills. The development of communication skills (critical for students with autism) should be a vital component of the IEP. It is important for the IEP to not only address areas of need, but also to outline ways to build upon a child's strengths in specific subjects or skills. Support services, such as occupational therapy to address the sensory needs of students with autism and speech therapy to advance the student's ability to understand and use language, must be included in a child's IEP when appropriate.

The IEP should also delineate any necessary adaptations to the learning environment or to school programming. Examples of adaptations to the learning environment include the physical placement of the student in the classroom, using visuals to enhance communication, or other modifications to the classroom. Examples of adaptations to the school programming include extending school days, lengthening the school year to include summer months, and/or extending education programs into the home environment.

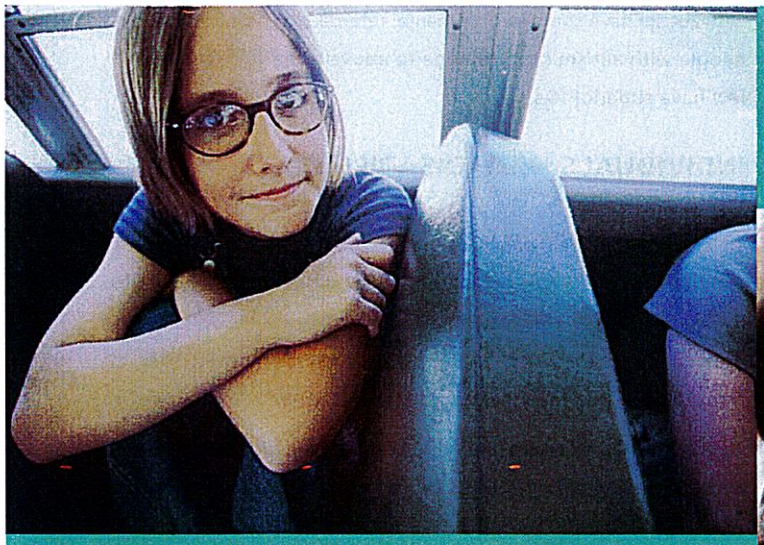
Failure is certain when the child with the disability is placed within the regular education setting with no backup support, no specialized training of the teachers, and no education of the classmates (Gresham, 1982).

APPROACHES TO EDUCATION

The determination of an appropriate educational approach for students with autism must be based on the needs of each individual child. Careful assessment by a team of professionals in consultation with parents or guardians will help determine an appropriate educational program for each student.

Highly structured educational setting with appropriate support and accommodations tailored to individual needs. The educational program should build on the interests of the child and use visuals to accompany instruction. When necessary, it should incorporate other services, such as speech or occupational therapy, to address motor skill development and sensory integration issues.

Children with ASD may be educated in classrooms partially or fully integrated with typical peers, in specialized classrooms within the regular school, or in a specialized school for children with special needs. Higher functioning individuals may be mainstreamed (included



IT IS VITAL TO NOTE THAT A CHILD'S ABILITY TO COMMUNICATE VERBALLY IS NOT A SOLE INDICATOR OF INTELLIGENCE.

INTERACTING WITH CHILDREN WITH AUTISM AT SCHOOL CAN BE A VERY ENRICHING EXPERIENCE FOR ALL INVOLVED.

Research indicates that exposure to peers without autism, if carefully planned and organized, may enhance social and communicative development, elevate self-esteem, and allow for opportunities to learn from positive role models in the classroom, on the playground, and in the community (Wagner, 1998).

Collaborative efforts to provide such a learning environment give teachers and school administrators the opportunity to work with professionals from other disciplines, such as speech pathology, occupational therapy, behavioral management, and special education. Teachers can play pivotal roles as creators of an accepting environment in the classroom and developers of mentoring and buddy systems to assist the child with autism.

Classmates in the regular education environment can enhance their own self-esteem, and their compassion and understanding of those who differ from the norm, by serving as peer models for behavior, communication, and socialization. Research has shown that acceptance of the child with a disability increases significantly when classmates receive information about the student with special needs and when they are given the chance to act as "peer tutors or buddies" with the full support of their teacher (Goldstein & Ferrell, 1987; Goldstein & Wiskstrom, 1986).

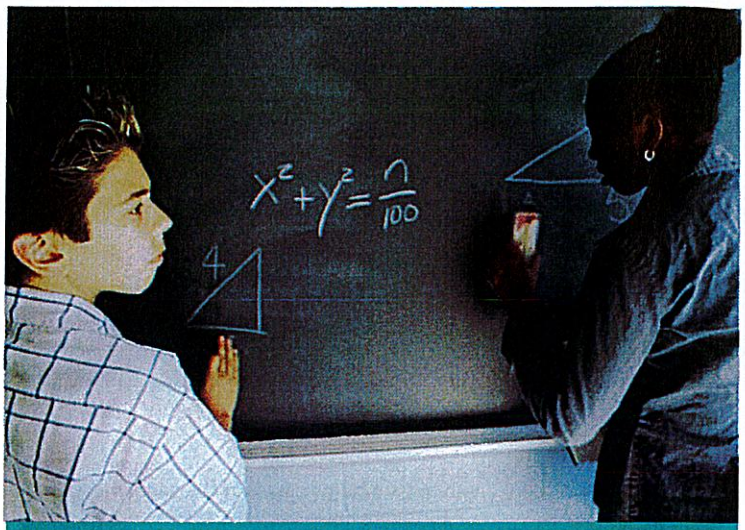
SPECIAL EDUCATION SETTINGS FOR STUDENTS WITH AUTISM

The more severe challenges of some children with autism may be best addressed by a special education setting that is highly structured with a low student-to-teacher ratio and ample accommodations to address core deficits.

Such accommodations may include extensive use of visual "cueing" or augmentative communication devices to address communication difficulties, as well as supportive therapies to address sensory processing impairments. Most special education curricula employ individualized behavioral interventions to help the child establish appropriate life skills.

Some special school settings provide opportunities for reverse mainstreaming. In this instance, a few children from other classes within the school are brought into the special education setting for a portion of the day. Interactions between these students and the students with autism are facilitated to promote modeling for communicative and social development. Another method used to provide age-appropriate models in the special education setting is to set up opportunities for peer tutoring. Children with autism are paired with "buddies" to help learn a particular subject or to perform a task.

Students benefit from a low teacher-student ratio. Professionals specifically trained in the unique learning styles of their students and who are proficient in accommodating the needs of each individual



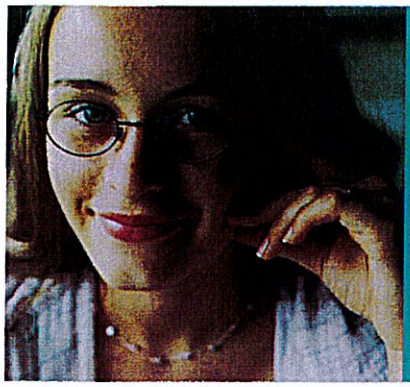
CHILDREN WITH AUTISM ARE PAIRED WITH "BUDDIES" TO HELP LEARN A PARTICULAR SUBJECT OR TO PERFORM A TASK.

can help all students reach their highest potential. Many special education schools have on site special equipment and services that would not usually be found in most other schools. Also, schools for children with special needs usually employ a family support coordinator who is available to provide families with resources for additional information, services, financial assistance programs, and more. Many such coordinators also conduct monthly parent meetings to help families support one another and to share experiences. Finally, schools for children with special needs generally provide respite services, emergency care, parent/guardian home training services, and sibling services (Harris, 1994).

HOW STUDENTS WITH AUTISM LEARN

To understand how children with autism learn, one must be cognizant of the core deficits that define autism and impede the development of the fundamental prerequisite skills essential for learning. Some unique learning characteristics of students with autism may include, but are not limited to:

- Attention difficulties
- Auditory processing impairments
- The inability to generalize (easily transfer knowledge from one setting to another)
- Difficulties with learning by observation and imitation
- Troubles with task/event sequencing
- Uneven patterns of strengths and weaknesses
- Problems with organization and planning
- Difficulties with time concepts and making transitions



DIFFICULTIES WITH AUDITORY PROCESSING CAN BE OFFSET BY PROVIDING VISUAL SUPPORTS, SUCH AS PICTURES, SYMBOLS, OR WRITTEN INSTRUCTIONS.

As most students with autism do not learn in the same manner as their typical peers, modifications to the curriculum may be necessary to help a child with autism succeed (Wagner, 1998). An extensive discussion of techniques used to address the unique barriers to learning presented by students with autism is beyond the scope of this booklet. However, a brief description is offered here. For more detailed information, consult the resources section at the end of this booklet, especially Grandin (1998), Holmes (1998), Powers (1997), and Schopler and Mesibov (1995).

ADDRESSING SENSORY DIFFERENCES

Many children with autism experience sensory input in variable ways. These sensory processing difficulties can be quite an impediment to learning. Attentiveness is often improved if accommodations are made to meet a child's sensory needs. An occupational therapist can often be an excellent source of ideas of ways to address these needs. A few suggestions are offered here.

Difficulties with auditory processing can be offset by providing visual supports, such as pictures, symbols, or written instructions. Visual stimuli–such as a picture-based communication system, picture sequencing to convey routines or rules, and the written word–can serve as permanent cues for students with autism (Hodgdon, 1995). Some students with autism are precocious readers; providing them with written instructions, schedules, routines, and/or rules can help them become successful participants in the classroom.

Children with autism may have difficulty processing the meaning of requests, whether visual or auditory. Allow for pauses to give time for a child with autism to determine an appropriate response. Some children have great difficulty processing auditory and visual stimuli simultaneously. Some children with autism have a great need for physical exercise. Often giving these children regular breaks to run, swing, or jump on a trampoline can help them become more organized and less anxious.

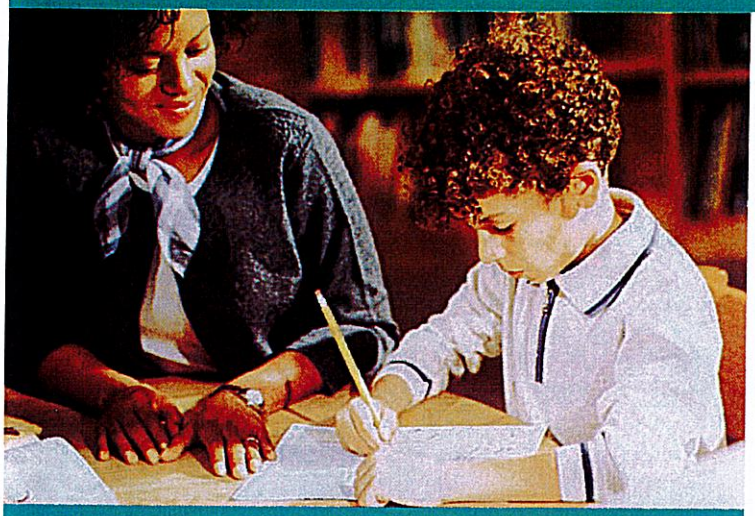
ADDRESSING ATTENTION DIFFICULTIES

Distractibility can be due to such things as self-stimulatory behavior or perseveration (an obsessive preoccupation with extraneous information or objects). Often distractibility can be addressed by redirection, prompting, and, at times, hand-over-hand manipulation. Careful observation of the environment from the child's eyes can help identify distracting elements that may be easily remedied by changing the child's seating arrangement or by removing or modifying the distraction. Allowing children with autism to have "breaks" to meet their sensory needs can often help improve attention. At the same time, it is important to provide stimulating instruction that is challenging to the student to prevent boredom that can lead to distractibility. Addressing Social Deficits

Opportunities to help children with autism understand social norms and improve social interactions can be created in a variety of ways. Setting up "buddy systems" or "peer tutoring" arrangements that pair children without disabilities with those with autism provides opportunities to observe and model behaviors. Some leaders in the field have employed a special "kids club" to provide extracurricular opportunities. Using pictures to convey classroom rules and etiquette and assigning multi-step tasks are often very helpful. Setting up play schemes based on social situations allows children with autism to "practice" some basic life skills, such as going to the doctor, shopping, or going to school. Stories written by the educator can be used to help students identify relevant social cues, become familiar with routines and rules, and develop desired social skills. These stories can also help prepare the child for unexpected occurrences or changes in routines (Gray, 1995; Gray & Garand, 1993).

ADDRESSING BEHAVIOR ISSUES

Children with autism have great difficulty expressing their feelings in conventional ways. Sometimes their behavior is often the only way they have to communicate feelings of frustration, anger, confusion, happiness, or boredom. While not all children with autism exhibit challenging behaviors, it is not uncommon to see children become aggressive, be disruptive, or have tantrums.



OFTEN PARENTS AND TEACHERS WILL COMMUNICATE DAILY THROUGH A NOTEBOOK THAT THE STUDENT CARRIES TO SCHOOL AND BACK HOME EACH DAY

ADAPTATIONS TO MAKE LEARNING EASIER FOR STUDENTS WITH ASD

To compensate for the social, communicative, and sensory impairments experienced by students with autism, modifications to the learning environment can greatly enhance an education program's effectiveness. There are many ways to adapt activities and materials to meet the needs of the students. Such modifications should be viewed by educators as an enhancement to learning.

EDUCATIONAL OUTCOMES

Until recently, individuals with autism did not have the educational opportunities now available. As a result, many adults with autism require some assistance in their daily living. However, some adults with autism hold professional careers and live independently. Although there is no known cure for autism, we do know that early and intensive intervention with some degree of inclusion in the regular education setting through- out the school years can greatly benefit some students with autism, providing them with the foundation needed to live full and productive lives.

Temple Grandin, Ph.D., a college professor and business owner, credits her considerable accomplishments to "creative, unconventional teachers and friends" who looked beyond her autism and helped her develop her talents and interests into a successful career. She states that, "the common denominator of many successful autism treatment programs is early intensive intervention and mainstreaming with normal children" (Grandin,1988).

RESOURCES FOR MORE INFORMATION

There are many resources for professionals to utilize for additional information on educating children with autism. Listed below are several of the books, videos, and web-sites available on this topic.

Helpful Responses to Some of the Behaviors of Individuals with Autism, by Nancy J. Dalrymple, 1992, Indiana Resource Center for Autism.

Adapting Curriculum & Instruction in Inclusive Classrooms: A Teacher's Desk Reference, by C. Deschenes, D.G. Ebeling, & J. Sprague, 1994, ISDD-CSCI.

Thinking in Pictures: And Other Reports from My Life with Autism, by Temple Grandin, 1996, Vintage Books.

The Original Social Story Book, by Carol Gray, 1993, Future Education.

The New Social Stories, by Carol Gray, 1994, Future Education.

Inclusion: 450 Strategies for Success: A Practical Guide for All Educators Who Teach Students with Disabilities, by Peggy A. Hammeken, 1997, Peytral Publications.

Siblings of Children with Autism: A Guide for Families, by Sandra L. Harris, 1994, Woodbine House. (1995 Literary Achievement Award, Autism Society of America)

Visual Strategies for Improving Communication, by Linda A. Hodgdon, 1995, QuirkRoberts Publishing.

Autism Through the Lifespan: The Eden Model, by David L. Holmes, 1998, Woodbine House. (1998 Literary Achievement Award, Autism Society of America)

Teaching Children with Autism: Strategies for Initiating Positive Interactions and Improving Learning Opportunities, edited by Robert L. Koegel and Lynn Kern Koegel, 1996, Paul H Brookes Publishing Co.

The Out-of-Sync Child: Recognizing and Coping with Sensory Integration Dysfunction, by Carol Stock Kranowitz, 1998, Perigee Books.

Behavioral Interventions for Young Children with Autism: A Manual forParents and

Professionals, edited by Catherine Maurice, Gina Green, and Stephen C. Luce, 1996, Pro Ed.

Children with Autism: A Parents'Guide, edited by Michael D. Powers, 1989, Woodbine House. (1990 Literary Achievement Award, Autism Society of America)

Teaching Children with Autism: Strategies to Enhance Communication and Socialization, edited by Kathleen Ann Quinn, 1995, Delmar Publishers.

How to Reach and Teach All Students in the Inclusive Classroom: Ready-to-Use Strategies, Lessons and Activities for Teaching Students with Diverse Learning Needs, by Sandra F. Rief & Julie A. Heimburge, 1996, The Center for Applied Research in Education.

Social Behavior in Autism (Current Issues in Autism), edited by Eric Schopler & Gary B. Mesibov, 1986, Plenum Publishing Corp.

Learning and Cognition in Autism (Current Issues in Autism), edited by Eric Schopler & Gary B. Mesibov, 1995, Plenum Publishing Corp.

Asperger Syndrome or High-Functioning Autism? (Current Issues in Autism), edited by Eric Schopler, Gary B. Mesibov, & Linda J. Kunce, 1998, Plenum Publishing Corp.

The Complete IEP Guide: How to Advocate for Your Special Ed Child, by Lawrence M. Siegel, 1999, Nolo Press.

Inclusive Programming for Elementary Students with Autism, by Sheila Wagner, 1998, Emory Autism Resource Center.

A Sense of Belonging: Including Students with Autism in Their School Community (20 minute video), 1997, Indiana Resource Center for Autism.

Autism: Being Friends (8 minute video), 1991, Indiana Resource Center for Autism.

Breakthroughs: How to Reach Students with Autism (25 minute video), featuring Karen Sewell, awarded "1998 Teacher of the Year," Autism Society of America, Attainment Productions, 1998, Verona, WI

REFERENCES

Goldstein, H., & Ferrell, D. (1987). Augmenting communicative interaction between handicapped and non-handicapped preschool children. *Journal of Speech and Hearing Disorders*, 52, 200-122.

Goldstein, H., & Wiskstrom, S. (1986). Peer intervention effects on communicative interaction among handicapped and nonhandicapped preschoolers. *Journal of Applied Behavior Analysis*, 19(2), 209-214.

Grandin, T. (1988). Teaching tips from a recovered autistic. *Focus on Autistic Behavior*, 1, 1-8.

Gray, C. (1995). Teaching Children with Autism to "Read" Social Situations. In K.A. Quill (Ed.), *Teaching Children with Autism: Strategies to Enhance Communication and Socialization* (pp. 219-241). Albany, NY: Delmar Publishers.

Gray, C., & Garand, J. (1993). Social stories: Improving responses of students with autism with accurate social information. *Focus on Autistic Behavior*, 8, 1-10.

Gresham, F. (1982). Misguided mainstreaming: The case for social skills training with handicapped children [abstract]. *Exceptional Children*, 48.

Harris, S.I. (1994). *Siblings of Children with Autism: A Guide for Families. Bethesda*, MD: Woodbine House.

Hodgdon, L.A. (1995). *Visual Strategies for Improving J Communication*. Troy, MI: QuirkRoberts Publishing.

Siegel, B. (1996). *The World of the Autistic Child: Understanding and Treating Autistic Spectrum Disorders*. Oxford, England: Oxford University Press.

Wagner, S. (1998). *Inclusive Programming for Elementary Students with Autism*. Atlanta: Emory Autism Resource Center.

The Autism Society is very grateful to the American Contract Bridge League for underwriting the original publication of this document in booklet form and other publications associated with our "Public Awareness of Autism in the Schools" Campaign, 2000-2001. This document can be found on the web site of the Autism Society free for download and duplication. © Autism Society of America, 2004, 2006

AUTISM SOCIETY

4340 East-West Highway, Suite 350
Bethesda, Maryland 20814
Phone: 301.657.0881 or
1.800.3AUTISM
Fax: 301.657.0869
Web: www.autism-society.org

Dyslexia Fact Sheet

Dyslexia is...

- ✓ **A brain-based issue** that makes it hard to learn to read accurately and fluently.
- ✓ **A lifelong condition.** Kids don't outgrow dyslexia, but with the right support, key skills can improve.
- ✓ **A common learning issue.** Many successful people have it, and researchers have been studying it for over a century.

Dyslexia is *not*...

- ⊗ **A problem of intelligence.** Kids with dyslexia are just as smart as their peers.
- ⊗ **A problem of vision.** The core issue involves understanding how the *sounds* in words are represented by letters.
- ⊗ **A problem of laziness.** Kids with dyslexia are already trying hard. They need more help to make progress.

Kids with dyslexia may have trouble with...

- Writing
- Spelling
- Learning a foreign language
- Reading smoothly
- Decoding (sounding out) written words
- Recognizing common words (sight words)
- Solving word problems in math
- Rhyming
- Understanding what they read

Ways to help kids with dyslexia

Multisensory structured literacy instruction engages kids through sight, hearing, movement and touch.

Accommodations help kids learn and show what they know, like doing an oral report instead of a written assignment.

Assistive technology tools, like audiobooks and text-to-speech apps, can help level the playing field for struggling readers.

Success stories

Salma Hayek, Oscar-nominated actress

Daymond John, *Shark Tank* star and CEO of FUBU

Carol Greider, Nobel Prize–winning scientist

Understood

For more information on dyslexia and how to help, visit u.org/dyslexia

Classroom Accommodations to Help Students With Dyslexia

What classroom accommodations help level the playing field for students with dyslexia? Here are some common ways schools make learning more accessible. Keep in mind that the accommodations listed here aren't the only ones available. Talk to your child's teachers for more ideas.

For Materials

- Get audiobooks through service like Bookshare, a free online library for students with disabilities.
- Provide pictures of directions and schedules.
- Use large-print text for worksheets.
- Simplify directions with key words for most important ideas.
- Provide colored strips or bookmarks to follow along when reading.

For Teaching Techniques

- Give step-by-step instruction (oral and written).
- Repeat directions, then check to see if students understand.
- Stick to consistent daily routines.
- Use small group teaching.
- Provide notes from the lesson, or organizers to fill in and follow along during the lesson.
- Review skills daily.
- Pre-teach new and important concepts.

For Classwork and Taking Tests

Teachers can...

- Provide extra time for reading and writing.
- Provide different ways to respond, like saying the answers, having larger spaces for writing, or circling an answer instead of filling in the blank.
- Hand out letter and number strips for students to look at so they can see how to write correctly.
- Provide sentence starters that show how to begin a written response.
- Show examples of work that is correct to serve as a model.
- Arrange worksheet problems from easiest to hardest.
- Allow understanding to be demonstrated in different ways (oral reports, video presentations, posters, etc.).

Students can...

- Use a text reader (like a Reading Pen or text-to-speech software).
- Partner up to study—one person writes while the other speaks, or they share the writing.

ACCOMMODATION TIP SHEET

What Are Some Common Accommodations for Kids with Dyslexia?

Each individual with dyslexia is different and their needs will have to be supported in different ways.

Review this accommodation list at a parent/teacher meeting and discuss what might be helpful to the student in the classroom. Some students may only require minimal accommodations while others may require more intense interventions, support and assistance. This list contains some common accommodations but it is not exhaustive.

READING

- Provide access to audiobooks
- Provide access to text-to-speech software
- Provide a set of textbooks for home use
- Only ask the student to read aloud if he volunteers
- Provide extra time for reading assignments
- Provide a quiet environment for reading
- Allow student to preview reading materials

SPELLING

- Reduce spelling lists
- Design spelling tests with a common phonetic skill
- Do not take off points for spelling errors on written work
- Allow access to a spellcheck
- Provide access to word prediction software

WRITING

- Provide a scribe
- Provide access to speech-to-text software
- Offer alternative projects instead of written reports
- Provide written copies of notes
- Minimize the amount of copying from the board
- Allow student to use a keyboard to take notes
- Allow student to tape record lectures
- Reduce written work
- Provide a letter formation strip
- Provide graphic organizers
- Grade assignments on content rather than form

MATH

- Allow use of calculator
- Allow use of math tables
- Allow use of manipulatives
- Allow finger counting or sub-vocalizing
- Provide graph paper
- Provide scrap paper
- Provide frequent checks for accuracy
- Highlight the operation to be performed

HOMEWORK

- Reduce homework
- Allow student to dictate answers
- Allow typewritten homework
- Limit time spent on homework
- Email list of assignments to student or parent
- Provide written list of assignments

TESTING

- Allow student to take tests orally
- Provide for extra time
- Read directions aloud
- Read test questions aloud
- Provide alternatives to testing (oral projects or videos)
- Provide a quiet testing area with minimal distractions
- Grade in collaboration with special educator
- Clarify or simplify written directions

What is dyslexia?

It is estimated that 1 in 10 people has dyslexia. Dyslexia exists in all cultures and across the range of abilities and backgrounds. Dyslexia often runs in the family. There is no 'cure' but lots of practical things can help overcome some of the barriers it presents. Dyslexia is a learning 'difference', which means that the brain can approach things in a different way to other people. Dyslexia can affect the way people communicate, and is different for everyone. It is not just about reading and writing and it has nothing to do with intelligence. Dyslexia is classed as a disability under the Equality Act.

Unidentified, dyslexia can result in low self-esteem, stress, behavioural problems, and underachievement. But with the right support, children and adults with dyslexia can reach their potential. Learners with dyslexia will benefit from early identification, appropriate intervention and targeted effective teaching. Adults with dyslexia will benefit from reasonable adjustments in the workplace such as using assistive technology.

Strengths associated with Dyslexia

Can be very creative and good at practical tasks.

Strong visual thinking skills such as being able to visualise a structure from plans.

Good verbal skills and social interaction.

Good at problem solving, thinking outside the box, seeing 'the whole picture'.

Difficulties associated with Dyslexia

Problems with reading, taking notes, remembering numbers, names and details.

Difficulty with time keeping, organising work or managing projects.

Difficulties with spelling and writing.

Short-term memory problems and sequencing difficulties such as following instructions or directions.

It is important to remember that everyone with dyslexia is different and that they will not necessarily experience all of the things above. Everyone has different strengths, difficulties and strategies that work for them.

In 2009, the Scottish Government, Dyslexia Scotland and the Cross Party Group on Dyslexia in the Scottish Parliament agreed a working a definition of dyslexia:

"Dyslexia can be described as a continuum of difficulties in learning to read, write and/or spell, which persist despite the provision of appropriate learning opportunities. These difficulties often do not reflect an individual's cognitive abilities and may not be typical of performance in other areas. The impact of dyslexia as a barrier to learning varies in degree according to the learning and teaching environment, as there are often associated difficulties".

(The full definition is available on Dyslexia Scotland's website).

What is the right support?

Support should take account of the learning styles and individual needs of the child or adult. Sometimes asking the person with dyslexia to suggest solutions to problems can produce simple but effective results. Things that can help are:

- Early identification and provision of appropriate support as soon as possible
- Peer support for help with reading/writing activities
- Use of mind-mapping or flow charts for project management
- Regular tasks and instructions broken down into graphics
- Use of coloured overlays and coloured paper
- Assistive Technology for reading, writing and recording of information

Dyslexia Scotland runs a confidential Helpline which can offer advice and information about dyslexia. Anyone can contact the Helpline. Phone 0344 800 8484 or email helpline@dyslexiascotland.org.uk (Monday – Thursday 10am – 4.30pm, Friday 10am – 4pm)

Further information

- **Dyslexia: A Beginner's Guide by Nicola Brunswick**
- **Dyslexia and Us: a collection of personal stories by Dyslexia Scotland**
- **Dyslexia Scotland has produced a wide range of leaflets on dyslexia which you can see at: www.dyslexiascotland.org.uk/our-leaflets**

Dyslexia Scotland
Charity No: SC 000951
Registered No: SC 153321
Dyslexia Scotland © 01/18

Developmental Coordination Disorder (DCD) Fact Sheet

DCD is...

- ✓ **A motor skills issue** that makes it hard to learn new skills and adjust body movements.
- ✓ **A common condition.** Experts say at least 1 in 20 kids have DCD. Most don't outgrow it, but they can improve their motor skills.
- ✓ **A common co-occurrence.** Half of kids with DCD have ADHD. Learning issues, autism and speech and language issues are also common.

DCD is *not*...

- ⊗ **The same in all kids.** Some struggle with gross motor skills (big movements), and others with fine motor skills. Some struggle with both.
- ⊗ **A sign of low intelligence or laziness.** Kids with DCD are as smart as their peers and are trying hard to improve motor skills.
- ⊗ **A learning disability.** But it affects learning, and some kids with DCD qualify for an IEP.

Kids with DCD may have trouble with...

- Handwriting
- Dropping or bumping into objects
- Coordination and balance
- Climbing stairs
- Planning and carrying out a sequence of movements
- Using scissors, forks and other utensils
- Driving
- Riding a bike and playing sports
- Brushing teeth, getting dressed and other self-care

Ways to help kids with DCD

Occupational therapy can help kids work on motor skills. **Physical therapy** can help with balance and strength.

Accommodations like extra time to complete tasks and **assistive technology** like dictation software can help kids with DCD show what they know.

Counseling and **support groups** can help build self-esteem in kids who struggle with motor skills.

What is dyspraxia?

Dyspraxia is an older term that some people use interchangeably with developmental coordination disorder (DCD). Experts prefer DCD because there is international agreement on the criteria for diagnosing it. Dyspraxia isn't as well-defined and sometimes is used to describe a broader set of issues.

Understood

For more information, go to u.org/dcd

A Cambian Education information sheet

Dyspraxia

Cambian
SEN Helpline 0800 288 9779
SENhelpline@cambiangroup.com

Dyspraxia is a condition that affects mainly movement – gross and fine motor skills but also any or all of the areas of age-appropriate developments such as language skills, social skills, sensory, emotional skills and perception. Problems appear in forming ideas, motor planning and execution but each individual is affected differently and to different degrees. There is no known cause and it is estimated that up to 10% of children may have dyspraxia (with 2% being significantly affected) and boys are affected four times more frequently than girls.

It is also known as developmental coordination disorder (DCD), motor learning difficulty, 'clumsy child syndrome' and perceptuo-motor dysfunction. Where the condition co-exists with ADHD it is called DAMP or Deficits in Attention Motor Control and Perception.

Parents may notice the problem early on. Their child may have trouble with some of the following:

- balance and co-ordination
- developmental milestones, look at: www.ntis.uk/Tools/Documents/Birth%20to%205%20Development%20Timeline.htm
- self esteem
- clumsiness
- eye control
- limited play choices
- isolation from peers.

Fine-motor skills may be affected, such as:

- doing up buttons, tying shoe laces
- picking up small objects
- writing, colouring, painting.

Gross-motor skills too, for instance:

- sitting, crawling, walking
- hopping, jumping
- riding a bicycle
- PE, ball-games.

Dyspraxia can also cause problems with the following:

- specific learning difficulties, particularly: spelling, reversals, rote learning, sequencing
- jigsaws and sorting
- poor social skills
- behaviour
- attention and task maintenance
- personal organisation
- coping with change in routine.

There might also be some speech and language or pronunciation difficulties caused by problems coordinating the various movements of the mouth and tongue. Children with dyspraxia need considerable support from adults.

DIAGNOSIS

If the child is at pre-school level then speak to a GP or Health Visitor and nursery staff, for a school age child speak to the teacher or the school special needs coordinator, the school nurse, school doctor or GP. These people can make referrals to appropriate services within the area for assessment, for example to a Paediatrician, hospital or community based therapy team, educational psychologists. Child development teams make assessments to determine the child's needs and provide appropriate advice and/or therapy. Another option is an assessment by a private Occupational Therapist.

HELP AT HOME

Getting dressed

- Velcro on shoes not laces or buckles
- lay out clothes in dressing order
- loose clothing
- avoid tie
- larger holes and buttons
- elasticated trousers and skirts
- clothes with a distinctive front and back, for example, a V-neck sweater, pleated trousers.

Eating

- use flexible straws
- don't fill cups too full
- non-slide mat for plate
- curved knives and forks.

Getting Organised

- Keep to a daily routine
- use timetables
- use post-its as reminders
- everything in a specific place
- cupboards and drawers labelled.

Motor skills

- Put aside time to help practice handwriting
- buy fun toys that help improve holding, placing, spatial awareness etc.
- play throwing and catching games
- encourage balancing on logs, walking on flower pots
- help to learn to ride a bike/trike.

Very important – Give lots of praise and encouragement!

HELP AT SCHOOL

- Reduce distractions in the classroom; keep desk clutter to a minimum
- Make a personal timetable and encourage use of a diary for upcoming events, homework dates, any extra equipment needed
- Give responsibilities/tasks which should involve others; encourage teamwork and make sure other children offer support especially in PE
- Encourage interaction with other pupils, by helping find and develop common interests such as pop music, fashion, etc
- Make sure that tables and chairs are at the right height and seating posture is correct, with feet on the ground. Note that sitting cross legged on the floor may be uncomfortable
- An angled board for writing and reading books may be beneficial
- Present small amounts of work at a time, set out tasks point by point, use tick boxes to aid completion of tasks, allow extra time and repetition
- Allow copying from paper next to them rather than a whiteboard
- Encourage different methods of recording apart from writing
- Use a line guide, window, ruler to aid easier reading
- In PE, give time to practice skills needed
- Offer lots of public praise at the appropriate time
- Always pick good points from the child's work.

Depending on the degree of severity, a child with dyspraxia may also benefit from regular interventions from some of the following:

(Educational) Psychologist if a child's difficulties are severe enough to require considerable in and out of school support, a full psychological assessment should be requested. When completed, this may lead to a Statement of Special Educational Needs.

Occupational Therapists can assess and diagnose dyspraxia and offer a range of interventions to help alleviate the problems. Some of the most commonly used approaches include Sensory Integration treatment and perceptual-motor training. This usually happens in a clinic environment, with OTs trained in Sensory Integration, where the child is given the opportunity to explore and interact with a sensory rich environment.

Physiotherapists help with gross motor skills, posture and general body image and management.

Speech Therapists can help young people who have speech and articulation difficulties. Be aware that treatment from too many therapists may result in the child missing a great deal of school, creating its own set of problems.

Specialist Teachers can support children within a mainstream setting to follow specific programmes and give advice to those working with them.

USEFUL CONTACTS

The Dyspraxia Foundation

The only national ADHD charity with advice and information for children, families, adults and professionals on all aspects of having

Dyslexia

Cambian
SEN Helpline 0800 288 9779
SENhelpline@cambiangroup.com

and living with ADHD. Local support groups are also listed on the website. Unfortunately their Helpline has been temporarily suspended from November 2011 due to funding difficulties.
Website: www.dyspraxiafoundation.org.uk
Email: dyspraxia@dyspraxiafoundation.org.uk

Contact a Family
UK wide advice on all aspects of caring for a child with any special need, disability or rare disorder; national SEN help line; downloadable fact sheets and publications; Connected magazine; local support groups and parent reps; campaigns and research etc.
Website: www.cafamily.org.uk
Tel: 0808 808 3555
Email: info@cafamily.org.uk

They also run a separate site Making Contact where you can share your experiences, get advice or local support from other parents with children with the same condition.
www.makingcontact.org.uk

The Foundation for Conductive Education and Red Boot's Children's Services
The FCE is a UK charity for children and adults with neurological motor disorders, mainly

Cerebral Palsy
but also including dyspraxia. The FCE and Red Boot's Children's Services are based in Birmingham. There are programmes for children with dyspraxia aged birth to 13 years (group or individual sessions). Parents can self-refer.
Website: www.conductive-education.org.uk/
Tel Red Boots: 0121 442 5540
Email Red Boots: ideana@conductive-education.org.uk

Various Conductive Education centres around the country offer different services, find a list here:
Website: www.gillian-maguire.info/2009/08/conductive-education-centres-in-uk-new-place.html

Hopscotch Children's Therapy Centre London
Hopscotch is an organisation providing assessments and treatment for children with Dyspraxia, Autism, ADHD and other developmental disorders. There is a clinic in Harley Street and North London which use Occupational Therapy & Sensory Integration Treatment and has links with The Child & Family Practice and the Great Ormond Street Hospital for Children. Hopscotch also works in partnership with Starjumpz in Kent.
Tel: 0207 486 8168
Website: www.hopscotchtherapy.co.uk
Email: info@hopscotchtherapy.co.uk

Starjumpz Childrens Therapy Centre Kent
Established in 1989, starjumpz is a multidisciplinary centre offering assessment and therapy, including specialist Sensory Integration Therapy, for children and young people with Dyspraxia, Developmental Coordination Disorder (DCD), Sensory Processing Disorder (SPD), ADD, ADHD, Aspergers, Autistic Spectrum Disorders, Developmental and Learning Difficulties. Professional and parent referral.
Website: www.starjumpz.com
Email: info@starjumpz.com
Tel: 01892 510257

The 3D Centre for Specific Learning Halifax
An independent organisation for supporting children and adults with Specific Learning Difficulties – Dyslexia, Dyspraxia (DCD) and Dyscalculia through identification and assessment, tuition for children and courses for teachers and other school staff and professionals.
Website: www.the3dcentre.co.uk
Tel: 01422 365 500

Therapy in Praxis Ltd York
A paediatric assessment, therapy and treatment service for children with dyspraxia, ADHD and sensory integration problems.
Website: www.therapy-in-praxis.co.uk
Tel: 01904 468 855

The Dyscovery Centre Wales
A post 16 and adult service that offers a diagnostic service from a team of specialists and a range of assessments and follow up advice and support for Development Coordination Disorder (DCD), dyspraxia, (ADHD, Asperger Syndrome, dyslexia but only if DCD/ dyspraxia present as well). Assessments for exam provision/workplace support; transition planning for FE, HE, workplace; organisation skills for education, home, workplace; goal setting; independent living skills. Self or professional referral.
Website: www.dyscovery.newport.ac.uk
Tel: 01633 432330
Email: dyscoverycentre@newport.ac.uk

READING

See the Cambian information sheet 'Books – where to find them' a list of specialist publishers with a huge range of books including those below.

Hands on Dyspraxia – Supporting Children and Young People with Sensory and Motor Learning Challenges.
Author Jill Christmas, 2009.

Developmental Dyspraxia – Identification and Intervention: A Manual for Parents and Professionals – 2nd edition. Author: Madeleine Portwood, 2007. ISBN 978-1-85346-573-4.

Dyspraxia: A Guide for Teachers and Parents.
Authors: Kate Ripley, Bob Daines, Jenny Barrett, 1997. Includes resource materials. ISBN 978-1-85346-444-7.

Understanding Developmental Dyspraxia – A Textbook for Students and Professionals.
Author: Madeleine Portwood, 2000.
ISBN 978-1-85346-574-1.

INTERNET SITES

www.matts-hideout.co.uk a website set up and run by Matt in 2001 to help him come to terms with his dyspraxia. The updated site aims to offer support and hope for young people with Dyspraxia and their families, while providing information about what it is really like forpeople living with hidden disabilities.

www.dyspraxia.org.uk a website with a video explaining one person's experience of Dyspraxia and a comments section.

www.dyspraxiaweb.org.uk a forum with resources, advice, and message board.

Acknowledgement: We would like to thank Starjumpz Children's Therapy Centre for their help in giving advice for and checking the content of this information sheet.

Dyspraxia

Dyspraxia is a neurologically based developmental disability which is present from birth. Dyspraxia means difficulty (dys) planning and sequencing movements required to perform a skill. There are three types of dyspraxia - Oral, Verbal and Motor. A child with dyspraxia may have one or a combination of all three types and in varying degrees of severity. It is believed that dyspraxia is an immaturity of parts of the motor cortex (area of the brain) that prevents messages from being properly transmitted.

Children with this disability appear the same as any other child however it is only when a skill is performed that the disability is noticeable. This disability does not impact on intelligence; however it can have a major impact on the child's social skills and acceptance by peers. The disability may also overlap with other conditions such as autism spectrum disorders, attention deficit hyperactivity disorder or dyslexia.

Verbal dyspraxia is a speech disorder that affects the programming, sequencing and initiating of movements required to make speech sounds. Children with verbal dyspraxia have difficulty forming words and letters. The muscles within our mouth and tongue assist in forming words. Children with verbal dyspraxia do have trouble with this but it is not the muscles themselves that are at fault. It is the messages being sent backwards and forwards to the brain that cause the problems. Children with verbal dyspraxia have to think out each mouth movement to form words, thus taking a long time to say something or even one word. This is tiring and frustrating for the child. Asking a child to repeat one word can be a difficult task.

Children with motor and oral dyspraxia have difficulties in coping with everyday activities, with movement difficulties that are complex and long lasting.

Effects on Developmental Areas

Social and Emotional

- May have a minimum social experiences
- May experience difficulties making and keeping friends
- May lack certain amount of independence
- May have lack of self esteem and confidence
- May avoid attempting or joining in with tasks
- May have attacks of rage and aggression

Motor and Physical Development

- May have difficulty swallowing or sucking
- May have poor coordination skills and appear clumsy in fine and gross motor activities
- May tire easily

Language and Communication Development

- May have difficulty speaking at all
- May have unintelligible speech
- May adopt a complex gesture system to aid communication skills
- May simplify words e.g. "har" for "harbour"
- May have delayed expressive language
- May have inconsistent speech patterns
- May exhibit "lost" or searching movements of the tongue and lips as they endeavour to find the position to make a sound
- May have difficulty with sequencing words, and sounds in words
- May understand instructions but find it hard to reply
- May not understand or use appropriate forms of communication
- May have difficulty in making or expressing choices
- May have more problems with speech when excited
- May learn to repeat rather than create sentences
- May mix up the order of sounds within a word
- May mix up the order of words within a sentence

Cognitive

- May have learning difficulties
- May not stay long at activities due to intense need to concentrate on words/speech
- May get frustrated when trying to describe something verbally
- May require instructions, directions etc. to be repeated 2 or 3 times and requires some time to process before responding or acting
- May have delays in skills of concentration, memory and ability to generalise
- May have difficulty understanding concepts of turn taking, sharing or how to enter into play situations

Dyspraxia
Inclusion Strategies

Each child diagnosed with **Dyspraxia** will be different and individual. It is important to gain information from the parents as to what characteristics of **Dyspraxia** their child displays. It is important to work closely with the parents as well as any additional support specialists e.g. therapists who may be involved with the child. It is also important to gain an understanding from the parent as to what is the most important aspect of their child attending your service. What is it that parents hope to gain from using your service? The following inclusion strategies are just some examples which may be applied to support the inclusion process. This list is only the start and it is dependant on a variety of factors such as environment, length of time child is in care, child's interest, likes, dislikes and skills already achieved. The strategies are divided into developmental areas however some strategies overlap and assist in a variety of developmental areas.

Social Development

- On arrival and farewell and when wanting child's attention say the child's name first to catch his attention e.g. "Jack, good morning" rather than "Good morning, Jack"
- These children tend to panic easily and respond badly to sudden changes in routine. Try to keep to routines
- Explain what you are doing as you are doing it when presenting an activity, giving instructions or encouraging turn taking/sharing
- Provide a quiet area with objects for child to explore independently
- Let other children know what child is doing to reinforce the concept of him being part of the group. Do this with all children e.g. "Look Jack is doing a puzzle as well"

Physical Development

- Hand eye coordination games actually help these children to talk better because these games encourage the child to learn how their bodies responds to actions and teaches them to understand how their bodies relate to the word about them
- Keep things in the same place to assist child to be able to move from one place to another. If you change the environment walk and talk this through with the child
- Count stairs, number of steps from each room to aid independence
- Provide finger plays to encourage the use of both hands in a controlled manner as well as developing fine motor skills
- Consider adapting the tools and materials used. For example, providing a larger brush that is easier to grip, or providing a smaller amount of clay to make it more manageable to hold. Tasks can be adapted to increase the chance of success. For example, they may be required to provide less detail in a drawing.
- Ensure the seating at table activities (including meal times) allows children to sit with their feet flat on the floor and provides good back support. Encourage an upright sitting position

Language

- Try to be patient with these children and do not keep interrupting or finishing a sentence for them
- Utilise the use of large clear pictures to reinforce what you are saying
- Para-phrase back what the child has said
- Clarify types of communication methods the child may use e.g. Makaton
- Provide puppets/pictures as an extra prop when using finger plays and songs
- Reduce the amount of instructions in one statement to allow time for the child to gain an understanding of what is been said e.g. "Hold the puppet up high" rather than "hold the puppet up high and wave it around so that all the children can see it." Once child understands to "hold the puppet up high" you can then add "Good, now all the children can see it"
- Avoid nagging and correcting as this can make the child tense and angry
- Ascertain from parents words that are familiar with the child e.g. family words that represent aspects of child life, and use these in your program

Cognitive

- Encourage use of a bright easily recognisable bag for child to be able to recognise his hook/locker
- Gain information from parents about child's likes, interests and dislikes and incorporate these in your program
- Break tasks down to smaller steps e.g. placing one puzzle piece in a time rather than expecting the puzzle to be completed
- Use a sequence of photos for regular tasks to support the child's understanding of how to do the task and in what order
- Allow the child time to complete tasks and practice skills at own pace
- Acknowledge level of achievement e.g. "you have placed that piece in the puzzle, well done" rather than just "Good boy"

Reference

Aspen Reference Group (1997) **Caregiver Education Guide for Children with Developmental Disabilities**. Aspen Publication

Brownlow, Andrea (1998) **More than Just Words: A handbook of Games and Activities to help include children with language and communication impairments.** Playcare PROGRAM & Dept Families, Youth & Community Care: Brisbane

Christmas, J. (2009) **Hands on Dyspraxia: Supporting Children and Young People with Sensory and Motor Learning Challenges.** Speechmark Publishing Ltd: Milton Keynes

Macintyre, C. (2000) **Dyspraxia in the Early Years.** David Fulton Publishers: Great Britain

Portwood, M. (1999) **Developmental Dyspraxia: Identification and Intervention A Manual for Parents and Professionals.** David Fulton Publishers

Vize, A. (2010) **A Practical Guide to Supporting Children with Dyspraxia.** Teaching Solutions: Albert Park, Australia

Dyscalculia Fact Sheet

Dyscalculia is...

- ✓ **A learning issue** that makes it hard to understand concepts related to numbers and do tasks like add and subtract.
- ✓ **A common condition.** Some experts say dyscalculia is just as common as dyslexia.
- ✓ **A common co-occurrence.** Dyscalculia can exist on its own but is often found in kids with issues like dyslexia and ADHD.

Dycalculia is *not*...

- ⊗ **A sign of low intelligence.** You can be very smart and have dyscalculia.
- ⊗ **The same thing as math anxiety.** But it often co-occurs with this emotional issue, which involves self-doubt and fear of failure.
- ⊗ **A lack of effort.** Kids with dyscalculia need different kinds of interventions to make progress—not more of the same instruction.

Kids with dyscalculia may have trouble with...

- Telling time
- Working with money, like making change
- Counting
- Remembering basic math facts, like 2 + 4 = 6
- Identifying symbols like + and – and using them correctly
- Understanding words related to math, like "greater than"
- Calculating on paper or in their head
- Telling left from right
- Understanding how numbers are related to each other

Ways to help kids with dyscalculia

Multisensory structured math instruction engages kids through sight, hearing, movement and touch.

Accommodations, like taking untimed tests or using blocks or other objects to help solve a math problem, can help kids show what they know.

Assistive technology tools, like calculators and digital graph paper, can help level the playing field for kids who struggle with math.

Success stories

Mary Tyler Moore
Award-winning actress

Kit Hughes
Tech entrepreneur and CEO of Look Listen

Cher
Singer and actress (who also has dyslexia)

Understood

For more information on dyscalculia and how to help, visit u.org/dyscalculia

Classroom Accommodations to Help Students With Dyscalculia

What accommodations can help students with dyscalculia? Here are some ways teachers can make learning easier for kids with dyscalculia.

For In-Class Learning

- Review what the student already learned before teaching new skills.
- Let the student talk about how to solve problems.
- Let the student write out charts or draw sketches to solve problems.
- Use graph paper to help line up numbers and problems.
- Give the student a list of the math formulas taught in the class.
- Use manipulatives such as coins, blocks and puzzles.

For Homework

- Create separate worksheets for word problems and number problems.
- Highlight or circle key words and numbers on word problems.

For Classwork and Taking Tests

- Allow extra time on tests.
- Use a chart of math facts or multiplication tables.
- Let the student use a calculator when he's not being tested on computation.
- Give more space to write problems and solutions.
- Break down worksheets into sections.
- Use objects such as blocks or base ten sticks to teach math ideas.
- Check often to see if the student understands the work.

Understood

for learning & attention issues

For more tips and resources, go to understood.org

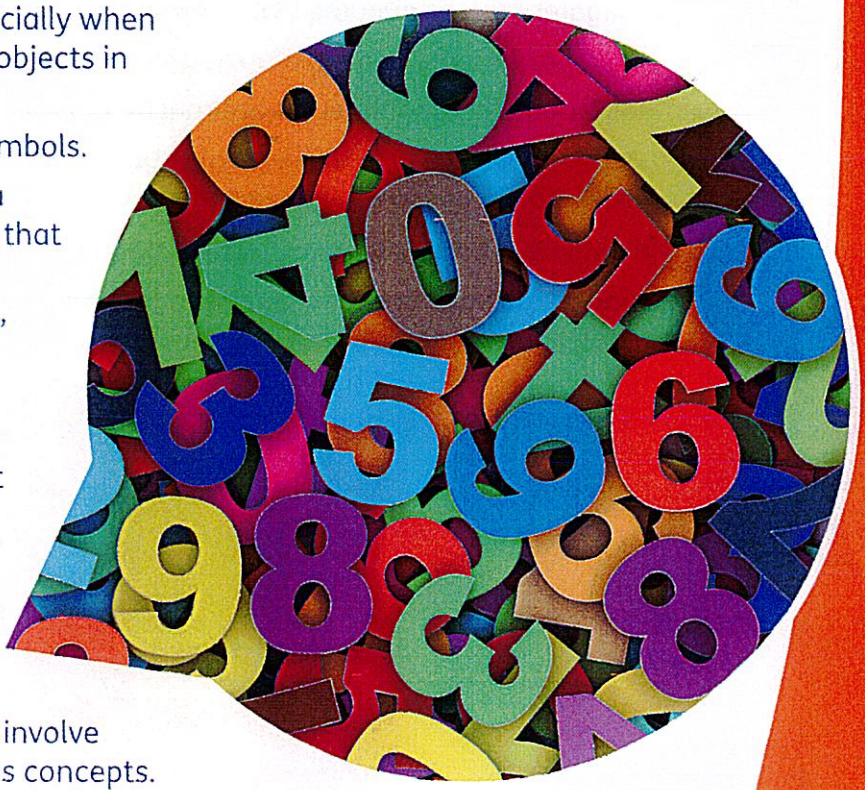
What is Dyscalculia?

Research into dyscalculia is still in the early stages compared with dyslexia. It is estimated that dyscalculia affects 4 – 6% of the population and it often co-occurs alongside other specific learning difficulties such as dyslexia and dyspraxia. Just as there is no single set of indicators that characterises dyslexia, there are a number of areas which can cause dyscalculic difficulties. There are many areas which people with dyslexia may also find difficult. These could include written number problems and difficulties caused by poor working memory.

In general, people with dyscalculia have poor 'number sense'. Number sense is an intuitive understanding of how numbers work. Number sense is at the core of maths learning. In a similar way that a lack of phonemic awareness causes people with dyslexia to struggle with reading, a lack of number sense causes people with dyscalculia to struggle with maths concepts. If individuals don't understand the basics about how numbers work, learning maths and using it every day can be very frustrating.

Signs of Dyscalculia in pre-school children

- Has trouble learning to count, especially when it comes to assigning a number to objects in a group.
- Has trouble recognising number symbols.
- Struggles to connect a number to a real-life situation, such as knowing that '3' can apply to any group that has three things in it – 3 biscuits, 3 cars, 3 toys.
- Has trouble remembering numbers and skips numbers long after other children of the same age can count and remember numbers in the right order.
- Finds it hard to recognise patterns and sort items by size, shape or colour.
- Avoids playing popular games that involve numbers, counting and other maths concepts.



Signs of Dyscalculia in Primary School

- Has trouble recognising numbers and symbols. For example making the connection between '7' and the word 'seven'.
- Has trouble writing numbers clearly or putting them in the correct order or the correct column.
- Has trouble coming up with a plan to solve a maths problem.
- Struggles to understand words related to maths such as 'greater than' and 'less than'.
- Can have trouble telling left from right and has a poor sense of direction.
- Has difficulty remembering phone numbers and game scores.
- Avoids playing games that involve number strategies.
- Has difficulty learning and recalling basic maths facts.
- Struggles to identify symbols such as +, -, ×, ÷ and use them correctly.
- May still use fingers to count instead of using more sophisticated strategies.
- Has trouble telling the time.

Signs of Dyscalculia in High School and adults

- Anxiety when it comes to numbers.
- Struggles to apply maths concepts to everyday life. This includes money matters such as estimating the total cost, working exact change and working out a tip.
- Has trouble measuring things like ingredients in a simple recipe. Would struggle to double or halve quantities in a recipe.
- Struggles with finding their way around and worries about getting lost.
- Has a hard time grasping information shown on graphs or charts.
- Has trouble finding different approaches to the same maths problem.
- Lacks confidence in activities that require estimating speed and distance, such as playing sports and learning to drive.
- Struggles to read scales such as thermometers.

It is important to note that these are just indicators and are not the same as an assessment of dyscalculia.

Further information

- www.dyscalculia.me.uk
- www.callscotland.org.uk (visit their list of Maths Apps)
- **Dealing with Dyscalculia: Sum Hope** by Steve Chinn
- **Dyslexia, Dyscalculia and Mathematics** by Anne Henderson
- Dyslexia Scotland Helpline 0344 800 8484 or helpline@dyslexiascotland.org.uk

Dyslexia Scotland
Charity No: SC 000951
Registered No: SC 153321