



INTERNATIONAL BACCALAUREATE ORGANIZATION

Teaching students with particular
special educational and learning needs—
a resource for schools

*Teaching students with particular special educational and learning needs—
a resource for schools*

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Introduction

“If I can’t learn the way you teach will you teach me the way I can learn?”

(Unattributed)

This publication aims to support classroom teachers in all three IB programme areas in response to concerns about enhancing the learning of students with special educational needs in the mainstream classroom.

Special educational needs students, as defined in this document, may display difficulties or conditions that are a barrier to learning and therefore need particular teaching strategies for classroom management and effective education.

These guidelines are not intended for diagnostic purposes. They are designed to raise awareness of particular special educational needs within the classroom. A better understanding of the various special conditions and their impact empowers teachers to meet the individual learning needs of those students and to improve their inclusion in the mainstream classroom.

It is understood that in the context of an inclusive programme, such as the Primary Years Programme (PYP) and Middle Years Programme (MYP), teachers need to be skillful in determining the learning needs and styles of all students in their care in order to differentiate the delivery of the programme. This publication may be the first step for classroom teachers in gaining some knowledge about a particular special need that has arisen in their classrooms. It may assist in raising their awareness of the various learning styles that may be apparent in their classrooms, and be a quick reference to guide a teacher’s deeper thinking and reflection on good classroom practice.

Many learning difficulties and conditions have similar characteristics and if a teacher wishes to recommend diagnostic assessment this should be carried out by a medical practitioner, an educational psychologist or a special educator as appropriate. Some of the difficulties mentioned require management of the medical condition rather than learning strategies and this may need to be done in conjunction with parents, medical practitioners and other specialists.

Teachers of students with particular special educational needs must be aware of local guidelines and follow mandated laws that affect the rights of the student. The IBO publication *Candidates with Special Assessment Needs* outlines clearly special arrangements applicable to the IB Diploma Programme. These guidelines may assist teachers in developing ways to accommodate students in their classrooms depending on their age and level of education. These documents are intended to be used in conjunction with joint planning by the general education and the special education teachers.

It is not essential to read these guidelines in their entirety. Each section of the document provides information about a particular area or special need. A summary of the special need is given under the heading of each section, followed by information about the nature of the disorder, suggested teaching strategies, and ideas for resources.

Attentional disorders

Attention deficit disorder (ADD) and attention deficit hyperactivity disorder (ADHD)

ADD refers to those students who exhibit disturbances in which the primary characteristic is inattentiveness.

ADHD refers to those students who display the above disturbances with hyperactivity.

Not all students would display all the following characteristics. For some students medication may be an option.

Nature of difficulty and implications for learner	Teaching strategies	Resources
<p>Difficulty sustaining attention</p> <p>Students may:</p> <ul style="list-style-type: none"> • have difficulty staying focused on the task • have difficulty listening to details and remembering instructions • have very short-term memory • be easily distracted by internal and external stimuli • not fully understand the task. 	<p>Teachers may:</p> <ul style="list-style-type: none"> • seat students near them, away from distractions • negotiate an individual physical or visual cue to bring students back to work • help students to keep their workspace free from distraction. 	<ul style="list-style-type: none"> • One-to-one assistance to maintain attention on activities and tasks • Individual workspace free from distraction
<p>Lack of organization</p> <p>Students may:</p> <ul style="list-style-type: none"> • be unaware of time frames • lose belongings • be unaware of mess. 	<p>Teachers may:</p> <ul style="list-style-type: none"> • help students to plan their daily routine • encourage use of a diary/planner and check it regularly • encourage and acknowledge punctuality • encourage having two sets of materials, one at school and one at home • use a timer for activities. 	<ul style="list-style-type: none"> • Diaries • Timetables • Daily schedules • Calendars • Planners • Checklists • Written outline of instructions • Models of well-presented work • Word processor with spellchecker • Timers
<p>Inconsistent effort</p> <p>Students may display:</p> <ul style="list-style-type: none"> • incomplete work • poorly presented work • an inability to start and sequence steps needed to complete a task • a focus on unnecessary details. 	<p>Teachers may:</p> <ul style="list-style-type: none"> • adapt the task • provide clear step-by-step instructions • model breaking the task into steps • set frequent interim deadlines • consider negotiating extra time • allow enough time to copy homework instructions • increase the time spent on tasks over small intervals. 	

Nature of difficulty and implications for learner	Teaching strategies	Resources
<p>Disruptive behaviour Students may:</p> <ul style="list-style-type: none"> • shout out inappropriately • constantly tap, squirm or move around the classroom • speak out of turn. 	<p>Teachers may:</p> <ul style="list-style-type: none"> • reward good behaviour • ignore inappropriate behaviour • determine with students the appropriate time and place for physical movement around the classroom. 	<ul style="list-style-type: none"> • Stress ball or alternative (discuss when and how to use) • Classroom contract outlining expectations and goals
<p>Hyperactivity and impulsivity—ADHD Students may:</p> <ul style="list-style-type: none"> • fidget • take dangerous risks • be unaware of the consequences of their actions • display poor coordination • fail to relate to past experiences. 	<p>Teachers may:</p> <ul style="list-style-type: none"> • provide rest periods between tasks • use a multisensory approach to explore new concepts and materials • teach ways to stop and reflect before acting. 	<p>Assistant or aide to supervise and manage behaviour, particularly in areas of high risk, health and safety:</p> <ul style="list-style-type: none"> • transport • playgrounds • laboratories • technology • machinery.
<p>Problems with waiting, taking turns and following directions Students may often:</p> <ul style="list-style-type: none"> • be noisy • be disruptive • miss crucial parts of lessons • forget homework/deadlines/timetables • need assistance to take medication • take risks • be unaware of consequences • be easily bored • make sudden decisions. 	<p>Teachers may plan activities that:</p> <ul style="list-style-type: none"> • allow movement frequently • give practice in waiting turns • change the type of activity regularly • take place in distraction-free zones. <p>Teachers may use a system of behaviour modification based on:</p> <ul style="list-style-type: none"> • rewards • daily evaluation systems • short measurable goals. 	

Autism spectrum Autism

Autism is a spectrum of complex developmental disabilities that affect the way a person communicates and relates to others. The spectrum includes Asperger's syndrome. Ten per cent of the autistic population are said to possess extraordinary skills such as mathematical skills, memory skills, artistic ability or musical ability.

Nature of difficulty and implications for learner	Teaching strategies	Resources
<p>Learning difficulties are usually displayed Students may lack focus.</p>	<p>Teachers may:</p> <ul style="list-style-type: none"> • place students in groups relating to their strengths • use one-to-one teaching or support • use different methods to keep students focused on task. 	<ul style="list-style-type: none"> • Computers • Visual displays • Teaching aids
<p>Students may have limited areas of interest.</p>	<p>Teachers may use different methods to motivate students to extend areas of interest.</p>	<ul style="list-style-type: none"> • Plenty of verbal communication • Assistants or aides • Prompters
<p>Students may have poor social skills.</p>	<p>Teachers may encourage interaction with peers by providing structured activities or games where specific roles are identified.</p>	<ul style="list-style-type: none"> • Group activities • Role plays in social contexts
<p>Students may lack organizational skills.</p>	<p>Teachers may:</p> <ul style="list-style-type: none"> • provide a written or graphic timetable • maintain routines—set times for work • use the same room or prepare students for room changes • clarify lists and tasks • use repetition • give regular, clear and short instructions • remove unnecessary objects in the environment • present teaching aids one by one. 	<ul style="list-style-type: none"> • Diaries • Ring binders • Log books • Timetables • Schedules • Maps • Graphic instructions • Pictorial, written or recorded cues • Lists of tasks • Lists of instructions • No clutter or mess

Autism spectrum Asperger's syndrome

Asperger's syndrome is within the spectrum of autism. It is a neurological developmental disorder that affects the way a person communicates and relates to others and their environment. Students with Asperger's syndrome differ from those with autism in that they may not have the accompanying learning difficulty. They may not, however, have the emotional resources to cope with the demands of the classroom.

Nature of difficulty and implications for learner	Teaching strategies	Resources
<p>Difficulties in relating to others</p> <p>Students may:</p> <ul style="list-style-type: none"> • display inappropriate or limited social behaviours (eg poor eye contact, limited facial expressions) • be isolated, relate better to adults or older or younger children • have difficulties with understanding, forming and maintaining social friendships. 	<p>Teachers may:</p> <ul style="list-style-type: none"> • provide a predictable, safe environment • use consistent routines • limit the number of rules • minimize change and prepare for it in advance • avoid surprises • teach, model and correct behaviours • recognize, reward and reinforce positive behaviours to bring about change. 	<ul style="list-style-type: none"> • Clean, orderly environment • Clocks • Timers • Timetables • Schedules • Diaries • Mentoring and tutoring
<p>Poor social skills and lack of empathy</p> <p>Students may:</p> <ul style="list-style-type: none"> • not understand social rules and their implementation • ask inappropriate, sometimes repetitive, questions as the basis for initiating social contact • be inclined to make "black and white" judgments that are difficult to change • insist on sameness. <p>Students may also be hypersensitive to their environment (eg to colour, noise, clothing and visual stimuli).</p>	<p>Teachers may:</p> <ul style="list-style-type: none"> • use plenty of verbal communication and modelling of appropriate behaviour • organize role play of realistic social situations likely to cause most difficulty • praise classmates for compassion • promote empathy and tolerance • attempt to educate teachers, support staff and other students in relation to the disability. 	

Nature of difficulty and implications for learner	Teaching strategies	Resources
<p>Difficulties in communicating</p> <p>Students may:</p> <ul style="list-style-type: none"> literally interpret the spoken word leading to inappropriate verbal responses and actions experience difficulty in beginning and sustaining conversations have difficulties with imaginative or creative activities. <p>Repetitive language</p> <p>Students may:</p> <ul style="list-style-type: none"> display formal stilted speech in a monotone, which can appear inappropriate and insincere show fluent language skills that might lack relevance have a speaking style and impressive vocabulary that gives the false impression that they understand what they are talking about, when in reality they are merely parroting what they have heard or read. 	<p>Teachers may:</p> <ul style="list-style-type: none"> modify instructional language to be clear and precise check that students have understood instructions remember that all strategies will need constant repetition carefully plan membership of paired and group activities highlight good role models of social interaction within all classroom situations and the wider environment. 	<ul style="list-style-type: none"> Assistants or aides Prompters Communication-type activities Role play Access to a speech therapist for guidance Visual displays of rules and expectations for each subject area Video scenarios that highlight good social role models
<p>Obsessive and compulsive behaviour</p> <p>Students may:</p> <ul style="list-style-type: none"> lack flexibility show rigid reasoning and appear to lack common sense display repetitive behaviours—pacing, tapping, hand washing, brushing surfaces. <p>Developmentally, there are critical stages, such as puberty, that have to be carefully monitored.</p>	<p>Teachers may set time aside for students to talk about their interests, but outside of the classroom.</p>	<ul style="list-style-type: none"> Visual displays of rules and expectations for each subject area Video scenarios that highlight good social role models Communication-type games Role play
<p>Emotional vulnerability</p> <p>Students may display:</p> <ul style="list-style-type: none"> crying frustration inattentiveness temper outbursts, rage stress depression chronic fatigue. 	<p>Teachers may:</p> <ul style="list-style-type: none"> acknowledge the fact that outbursts will occur limit outbursts by recognizing signals or triggers and offering a consistent approach keep their voice quiet, calm, predictable, matter of fact be alert to changes in behaviour introduce and use social cues for inappropriate social behaviour. 	<ul style="list-style-type: none"> Time out for quiet individual activities (eg games or computer activities) Social and life skills courses and games Guidance from counsellors

Nature of difficulty and implications for learner	Teaching strategies	Resources
<p>Poor physical coordination</p> <p>Students may display:</p> <ul style="list-style-type: none"> • poor motor coordination • clumsiness. 	<p>Teachers may:</p> <ul style="list-style-type: none"> • encourage participation in health/fitness sessions • provide an alternative session of non-competitive sport or fitness wherever possible • carefully structure and introduce students to a competitive sports regime, recognizing the difficulties they have in this area. 	<ul style="list-style-type: none"> • Fitness equipment • Guidance from an occupational therapist for a course of exercises suited to their needs
<p>Academic strengths/weaknesses</p> <p>Students may:</p> <ul style="list-style-type: none"> • have above-average intelligence but lack higher-level thinking and comprehension skills • be skilled at rote learning but may not demonstrate understanding • have penmanship problems and may avoid writing tasks • have slow writing speed • have poor concentration • have high distractibility associated with both environmental factors and thought processes • need to be constantly reminded of the time allocated to a task • display impulsivity related to classroom activities where they may jump from task to task without direction. 	<p>Teachers may:</p> <ul style="list-style-type: none"> • simplify and modify lesson content and instructions • remember that students' comprehension skills may be good but that they may not understand everything • remember that students' writing assignments can be repetitious or may jump from one topic to the other • encourage students to focus on the real world and to leave inner thoughts and fantasies behind • divert students from persistent questioning about fixations • produce guide lines on paper to help with the control and uniformity of writing • allow extra time • encourage use of a computer • ensure structured sessions • break down work into smaller steps • offer frequent teacher feedback • give redirection opportunities • use non-verbal signals to bring students back on task. 	<ul style="list-style-type: none"> • Guide lines for writing • Word processors • Voice-activated software • Tape players • Prompters/aides • Signs • Flash cards • Visual cues

Chronic illnesses

Chronic illnesses include a variety of persistent medical conditions that impact on learning and may or may not be affected by medication over a long period of time. They include allergies, asthma, cancer, chronic fatigue, diabetes, epilepsy and rheumatoid disorders. Though different in nature, these chronic illnesses may have similar implications for the learner and strategies for the classroom. A key resource person will be necessary to establish links between student, parents, medical contacts and the school, taking confidentiality into consideration.

Nature of difficulty and implications for learner	Teaching strategies	Resources
<p>Delayed and interrupted academic progress</p> <p>Students may:</p> <ul style="list-style-type: none"> • have been highly able and maintain high expectations for achievements in all activities despite the illness • have gaps in conceptual knowledge • have uneven patterns in learning • be easily frustrated by academic performance or demands. 	<p>Teachers may:</p> <ul style="list-style-type: none"> • acknowledge the illness and the limitations it imposes on the ability of students to undertake academic tasks • work within the parameters set by the illness • negotiate a realistic number of subjects with/for students. 	<p>A nominated central resource person to:</p> <ul style="list-style-type: none"> • collect and distribute information to support the learner and inform staff • adapt and modify learning materials and adapt curriculum content • keep teachers informed about the ongoing nature of the illness • make special arrangements for internal and external assessments.
<p>Decreased organizational skills and high distractibility</p> <p>Students may:</p> <ul style="list-style-type: none"> • lack concentration because of medication/treatment or the nature of the illness • have difficulties with time management • lose some of their materials, notes or equipment. 	<p>Teachers may:</p> <ul style="list-style-type: none"> • establish a daily routine as soon as possible • balance time for rest, work and recreation • use a diary • use a prompt in the classroom to bring students back on task. 	<p>Refer to <i>Candidates with Special Assessment Needs</i> booklet.</p> <p>The following support mechanisms could be used:</p> <ul style="list-style-type: none"> • prompters • readers • computers • extra time • rest breaks.
<p>Unwillingness to take risks</p> <p>Students may:</p> <ul style="list-style-type: none"> • have doubts about their ability and feel insecure • not fully participate in classroom activities. 	<p>Teachers may:</p> <ul style="list-style-type: none"> • encourage responsibility • encourage decision-making activities. 	
<p>Increased dependence on others: family, friends, teachers and support staff</p> <p>Students may:</p> <ul style="list-style-type: none"> • need constant reassurance • need physical support. 	<p>Teachers may:</p> <ul style="list-style-type: none"> • clarify and adjust tasks required from students • teach coping strategies • remember that the ultimate goal for students is increased independence and ownership of their learning. 	

Chronic illnesses

Nature of difficulty and implications for learner	Teaching strategies	Resources
<p>Lack of confidence and reduced self-image</p> <p>Students may:</p> <ul style="list-style-type: none"> • be unable to seek out assistance • be unable to attempt new skills • be hesitant in approaching work or tasks • not be able to make decisions • find it difficult to initiate and maintain friendships • be excluded from social events • have a high level of anxiety. 	<p>Teachers may:</p> <ul style="list-style-type: none"> • highlight the strengths of students • provide extra time for classroom tasks or assignments • check for understanding • offer one-to-one support if needed • encourage and initiate social contact with peers • emphasize the need to “get on with life”. 	

Communication and speech disorders

Stammering and stuttering

Stammering and stuttering are characterized by a silent or audible involuntary repetition/prolongation of an utterance be it a sound, syllable or word. This disorder impacts on language development, learning and social interaction.

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Nature of difficulty and implications for learner	Teaching strategies	Resources
<p>Articulation difficulties</p> <p>Students may:</p> <ul style="list-style-type: none"> • have a tendency to rush through oral tasks • have slow verbal responses • not like reading aloud • have high anxiety levels when reading • have comprehension difficulties • in writing, make spelling errors that tend to be phonetic • have difficulty in spell checking work. 	<p>Teachers may:</p> <ul style="list-style-type: none"> • give advance alert before questioning (“John ... what is ...”) • allow extra time for oral response • preview the lesson or reading with students • divide reading into smaller sections • make reading aloud in front of the class optional • promote the use of visual spelling strategies • discreetly check for understanding of materials and tasks • look at quality rather than quantity of responses in oral tasks or exams. 	<ul style="list-style-type: none"> • Access to speech therapist for assessment and monitoring • Special needs teacher to preview the material with students in advance • Parental support wherever possible • Audio cassettes of texts • Parents to reinforce language therapy sessions during the holidays
<p>Physical responses</p> <p>Students may:</p> <ul style="list-style-type: none"> • have physical reactions to reading such as: <ul style="list-style-type: none"> • sweating • blushing • muscular movement. 	<p>Teachers may:</p> <ul style="list-style-type: none"> • anticipate situations that could cause embarrassment or humiliation and minimize them • reduce anxiety in the classroom. 	
<p>Self-esteem in classroom and with peers</p> <p>Students may:</p> <ul style="list-style-type: none"> • stay quiet in class • lack initiative in participating • not interact with the group • not ask for clarification. 	<p>Teachers may:</p> <ul style="list-style-type: none"> • encourage participation by assigning and defining a task or role within a group • enlist peer-group support and understanding • carry out speech and language therapy sessions, concentrating on particular sounds • promote rules of oral presentation, emphasizing slowing down speed, and enhancing intonation and expression • encourage and highlight strengths to improve self-esteem. 	

Communication and speech disorders

Oral dyspraxia—childhood apraxia of speech (CAS)

Oral dyspraxia is a motor coordination difficulty in the production and articulation of speech. This disorder impacts on language development, learning and social interaction.

Nature of difficulty and implications for learner	Teaching strategies	Resources
<p>Speech that is hard to understand</p> <p>Students may have:</p> <ul style="list-style-type: none"> • rapid speech • slurred speech • guttural speech • slow verbal responses • high anxiety when reading. 	<p>Teachers may:</p> <ul style="list-style-type: none"> • carry out speech and language therapy sessions concentrating on particular sounds • promote rules of oral presentation, emphasizing slowing down speed, and enhancing intonation and expression. 	<ul style="list-style-type: none"> • Communication-type games • Speech therapist support and materials • Role play—visual and actual • Printed lists of tasks and instructions
<p>Physical difficulties in articulating certain sounds</p> <p>Students may:</p> <ul style="list-style-type: none"> • have a physical reaction during speech—sweating, blushing • display awkward jaw movements when trying to form speech • have difficulty with eating and chewing • not like reading aloud. 	<p>Teachers may:</p> <ul style="list-style-type: none"> • create opportunities to practise target sounds • allow reading aloud in class to be optional. 	
<p>Impact on learning</p> <p>Students may:</p> <ul style="list-style-type: none"> • display frustration at not being understood • have a tendency to rush through oral tasks • display poor comprehension • display poor spelling. 	<p>Teachers may:</p> <ul style="list-style-type: none"> • set up pairs or groups for oral tasks where another student is the spokesperson • check understanding of material and the task required discreetly • promote the use of visual spelling skills. 	
<p>Difficulties in social context</p> <p>Students may:</p> <ul style="list-style-type: none"> • have difficulty forming friendships with peers • find it difficult to relate to many different adults • lack initiative in participation • have low self-esteem. 	<p>Teachers may:</p> <ul style="list-style-type: none"> • enlist peer-group support and understanding • encourage participation through role play. 	

Communication and speech disorders

Information processing difficulties

Information processing difficulties can be associated with both expressive and receptive language. They involve speed, depth and interpretation of information. This disorder impacts on language development and learning.

Nature of difficulty and implications for learner	Teaching strategies	Resources
<p>Learning difficulties</p> <p>Students may:</p> <ul style="list-style-type: none"> • have a literal and superficial interpretation of information in general • over-focus on specific information that may not be relevant to the complexity of the task • not recognize and respond to important detail • have slow processing speed in reading and writing tasks • misinterpret oral information • be slow to respond verbally to questions; answers may seem irrelevant to key ideas • need extra time to process both instructions and information in order to prepare an answer. 	<p>Teachers may:</p> <ul style="list-style-type: none"> • utilize the preferred learning style of the student • recap previous learning • pre-teach new subject-specific vocabulary • frequently check for understanding • allow extra time for thinking and responses • repeat instructions if necessary • break tasks down into very carefully sequenced steps • provide techniques and practice in identifying key points • give positive feedback at each stage • differentiate the task outcome • extend deadlines • summarize lesson outcome. 	<ul style="list-style-type: none"> • Learning aids • Visual and graphic organizers • Enlarged print and key terms in bold • Recorded texts • Recorded responses • Use of Dictaphone for note taking

Communication and speech disorders

Semantic pragmatic disorder

Semantic pragmatic disorder is a communication disorder that impacts on both students' learning and social interactions. It can encompass both semantic difficulties and pragmatic difficulties to varying degrees or may be apparent in only one area.

Nature of difficulty and implications for learner	Teaching strategies	Resources
<p>Semantic difficulties</p> <p>Students may:</p> <ul style="list-style-type: none"> • have difficulty understanding the meaning of words and sentences • become confused and agitated by jokes, sarcasm, understatement and ambiguity • find it hard to read between the lines • have difficulty answering “wh” questions • think in literal and concrete terms • have great difficulty with abstract concepts (eg guess, imagine, next week) • become easily distracted. 	<p>Teachers may:</p> <ul style="list-style-type: none"> • keep the classroom as organized/structured as possible • give extra time to reply when asking a question • provide written or graphic: <ul style="list-style-type: none"> • timetables • schedules • diaries • log books • maps • minimize and prepare for change in advance • maximize consistent routines • carefully monitor lessons where there is a less controlled environment (eg physical education, music, drama) • provide clear rules on expected behaviour • avoid using abstract language • regularly check students' understanding of tasks, assignments, texts etc • monitor group work carefully • use communication courses to develop appropriate non-verbal skills and social interaction • praise appropriate communication skills • provide many practical and hands-on tasks. 	<ul style="list-style-type: none"> • Support from speech therapist • Specialist teachers • Parents • Pictorial, written or recorded cues • Printed lists of tasks and instructions • Communication-type games • Role play
<p>Pragmatic difficulties</p> <p>Students may:</p> <ul style="list-style-type: none"> • struggle with the use of social language • appear rude and outspoken • not be able to gauge accurately the effect they are having on the listener • often display inappropriate eye contact and facial expressions • rarely initiate or maintain a conversation • appear frustrating and irritating to others. 		

Emotional and behavioural difficulties

Emotional and behavioural difficulties are characterized by inappropriate behaviour that students cannot control and may be displayed as aggressive, unusual, unexpected or withdrawn behaviour. These behaviours can be triggered by a certain situation or stimulus that can disrupt the learning of students and others. No individual student will have all these symptoms but some symptoms are more common than others. Teachers should consider seeking professional support and case conferences may be required in dealing with these students.

Nature of difficulty and implications for learner	Teaching strategies	Resources
<p>Anti-social behaviour that is often uncontrollable</p> <p>Students may:</p> <ul style="list-style-type: none"> • lack concentration, daydream and fail to stay on task • be afraid to try for fear of failing • lack confidence in completing tasks • have difficulty in prioritizing and a tendency to be overwhelmed • have difficulty with working in groups • have difficulty in sustaining attention • show extreme test anxiety • fail to see consequences for their actions • lack motivation. 	<p>Teachers may:</p> <ul style="list-style-type: none"> • be aware of emotional/behavioural problems and carefully consider the classroom arrangement • establish a working relationship built on trust and mutual respect by both parties • ensure order and discipline in class so that learning can take place • outline social and behavioural expectations and ensure they are upheld • draw up written contracts with individual students stating rules and expectations • abandon the lesson if it is not working; engage in a fun activity and enable students to refocus • modify all tasks to make them achievable • be positive and give frequent praise • remain relaxed, controlling voice and body language • foster a sense of responsibility • use special assessment accommodations for internal and external assessment. 	<ul style="list-style-type: none"> • Advice and support from: <ul style="list-style-type: none"> • medical practitioners • educational psychologists • social workers • parents • specialist teachers • school nurse • school counsellor • voluntary organizations • Communication games • Role play • Yoga • Breathing exercises • Organizational aids: <ul style="list-style-type: none"> • timetables • daily schedules • checklists • calendars • planners • timers
<p>Inappropriate behaviour that is frequently attention seeking</p> <p>Students may:</p> <ul style="list-style-type: none"> • disrupt other students in the classroom • have a wide range of learning difficulties • be unable to maintain friendships • have unpredictable emotional outbursts • lack social skills; may not respect peers or teacher • have low self-esteem • display impulsivity • have depression • be anxious • be aggressive • have sudden mood changes • have appetite/sleep disturbance • suffer physical complaints • have problems socializing or with family relationships. 		<p>Refer to <i>Candidates with Special Assessment Needs</i> booklet.</p>

Gifted and talented—learning difficulties

Students of high intellectual potential who may be globally talented or have a particular talent fall into this category. These students may require a differentiated curriculum or a wider range of opportunities to fulfill their potential. Among this group of students there may be some, with learning difficulties, who have an exceptional talent in a particular area.

Nature of ability and implications for learner	Teaching strategies	Resources
<p>High intellectual abilities Students may:</p> <ul style="list-style-type: none"> • have advanced vocabulary • be very curious asking “how” and “why” questions • read widely and beyond age level • have a vivid imagination • have a strong sense of social justice • have higher-order thinking skills • need a structured, accelerated curriculum • be deep thinkers. 	<p>Teachers may:</p> <ul style="list-style-type: none"> • offer open-ended inquiry-based tasks • provide higher-order thinking and problem-solving activities • encourage students to take on roles of responsibility • provide a mentor and time within the school to assist with a particular interest such as art or music • plan for enrichment of units within the subject rather than providing more of the same • when introducing a new unit, test prior knowledge and use this as a starting point for students’ learning • encourage use of information and communication technology for research and development of higher-order thinking tasks • try to negotiate activities and work sessions • arrange and encourage meetings of like-minded students, for example, debating club, chess club. 	<ul style="list-style-type: none"> • Computer software • The Internet • Thinking-skills courses • Access to university courses • Access to mentors • Access to counsellor when needed • Library • Gifted and talented organizations and special courses • Organizational aids • Timetables • Daily schedules • Checklists • Calendars • Planners • Timers
<p>Talent may be wide-ranging or have a narrow focus Students may:</p> <ul style="list-style-type: none"> • display academic ability across a wide subject area • have a very specific interest that shows depth and complexity • be learning disabled but have a particular talent such as music, art, poetry, mathematics. 	<p>(In the case of the PYP, which is an inclusive programme requiring differentiated delivery of the curriculum through inquiry, most of the teaching strategies listed above would apply to all students.)</p>	
<p>Difficult to identify Students may:</p> <ul style="list-style-type: none"> • not display the same level of thinking in their written work • often become frustrated with writing because it is “too slow”. 		

Mental health difficulties

Mental health difficulties include a wide range of conditions that can affect a person's state of mind and their learning. The condition is usually under the management of a medical practitioner or specialist.

Nature of difficulty and implications for learner	Teaching strategies	Resources
<p>These difficulties may include:</p> <ul style="list-style-type: none"> • schizophrenia • depression • manic depression • extreme phobias • anxieties • emotional distress • self-harm • eating disorders • obsessive–compulsive disorder. <p>Students may:</p> <ul style="list-style-type: none"> • display memory problems • have low self-esteem • have poor attendance • display anxiety • be disorganized and miss deadlines • suffer effects of medication such as lack of concentration, drowsiness, poor concentration • lack motivation. 	<p>Teachers may:</p> <ul style="list-style-type: none"> • allow time for all tasks and both internal and external examinations • offer rest periods in class or time out in a small private area under passive supervision • give assistance with self-organization • be patient • show empathy • maintain contact with students/families during absences whenever possible to keep connection with school • give praise and positive feedback • negotiate with students for careful social inclusion in the class. 	<ul style="list-style-type: none"> • Advice from medical practitioners and parents • Advice from external agencies • Organizational aids: <ul style="list-style-type: none"> • timetables • daily schedules • checklists • calendars • planners • timers • Teacher's aide • Counselling support <p>Refer to <i>Candidates with Special Assessment Needs</i> booklet.</p>

Physical disabilities

Physical disabilities include a wide range of conditions that are not always immediately obvious but affect mobility and use of limbs.

Nature of difficulty and implications for learner	Teaching strategies	Resources
<p>Students with physical disabilities have special needs generally related to learning to cope with the physical environment.</p> <p>Students may:</p> <ul style="list-style-type: none"> • face additional difficulties associated with verbal expression and articulation • lack confidence • find it difficult to participate in all activities • be frustrated at being treated differently. 	<p>Teachers may need to be aware of student rights to access all areas of the curriculum.</p> <p>Teachers may:</p> <ul style="list-style-type: none"> • ensure students have access to all areas of the building, and suitable accommodation and seating • plan activities according to physical capabilities • allow extra time for movement around the school • allow rest periods when students tire • consider early or later dismissal from classes to avoid congestion and to ensure student safety • provide support staff such as note taker/scribe • consider alternative methods of assessment • arrange special accommodations for all assessments, internal and external. 	<ul style="list-style-type: none"> • Sympathetic support staff • Physiotherapy • Teacher's aide/carer for personal needs and medication • Teacher's aide to assist with writing and practical activities • Appropriate technology as an alternative to handwriting • Tape recorders • Videos as an alternative method of instruction <p>Refer to <i>Candidates with Special Assessment Needs</i> booklet.</p>
<p>Access</p> <p>Schools need to consider the following:</p> <ul style="list-style-type: none"> • building and curriculum access for wheelchair users • steps • ramps • lifts • handrails • space • toilets • doors • furniture • low work surfaces and chairs. 		

Sensory impairment

Vision

A visual impairment is when a student cannot perform, fully or partially, work for which eyesight is essential.

Nature of difficulty and implications for learner	Teaching strategies	Resources
<p>Visual impairment: students with differing ranges of eyesight Students may have difficulty with:</p> <ul style="list-style-type: none"> • mobility in the environment • depth perception • reflection, light and shadows • print size • visual representations and visual sensory concepts (colours, distance, area, reading and writing). <p>Blind students Students may:</p> <ul style="list-style-type: none"> • become tired quickly • have difficulty completing all tasks especially if more than one Braille code is involved in their learning • have incomplete or poorly formed concepts • have difficulty with abstract concepts. 	<p>Teachers may:</p> <ul style="list-style-type: none"> • familiarize visually impaired students with the classroom environment, particularly steps and differing levels of floor and furniture • keep the arrangement of the classroom consistent and accessible • verbally alert students to any changes within the classroom • increase other students' awareness of the need to maintain a safe environment (eg bags under desk, chairs pushed in) • keep all resources in one, known place always for easy access • encourage all students to return materials to the same place • ask students for their input on what assistance they require • give extra time to complete tasks • assign class members to help students move around the classroom and the school • use spatially precise language (eg "on the front desk" rather than "over there") • encourage and praise when tasks are completed independently • call students by name or gently tap on the shoulder • provide relaxation breaks • watch and correct student posture • check student understanding before beginning a task • ensure full understanding of a concept by detailed questioning • give constant feedback 	<ul style="list-style-type: none"> • Medical practitioners/specialists • Other outside agencies • Books on tape • Tape recorder to record lectures or lessons as needed (alternative to taking notes) • Reader/scribe • Devices such as: <ul style="list-style-type: none"> • abacus for mathematics • magnifying glass • Braille scripts • word processors • coloured paper/pen • coloured filters • place markers for reading • modified colours • CCTV (closed circuit television) • computer software. <p>Refer to <i>Candidates with Special Assessment Needs</i> booklet.</p>

Nature of difficulty and implications for learner	Teaching strategies	Resources
	<ul style="list-style-type: none"> • target other senses such as smell, touch and hearing to reinforce learning of concepts • provide tactile manipulatives to explain and reinforce abstract and visual concepts • use embossed text or three-dimensional materials (maps or diagrams) wherever possible • offer coloured paper, pens/chalk and filters where necessary • focus on oral presentation of materials, concepts and assignments using tape recorders and Dictaphones • allow use of word processors and large print materials • provide alternative methods for reading and writing (Braille) • encourage the use of both systems (written text and Braille) if it is a deteriorating condition • give extra time to complete assignments, class tests and external examinations • take every opportunity to praise students • make sure expectations are clear and realistic • be aware of sensitivity to background noise and reduce if necessary (eg tapping or air conditioning) • make sure the lighting is adequate and check with students for glare and reflection. 	

Sensory impairment

Hearing

A sensory dysfunction in the outer, middle or inner ear that includes a hearing loss of different frequencies and ranges from hard of hearing through to deafness.

Nature of difficulty and implications for learner	Teaching strategies	Resources
<p>Poor discrimination of sounds This loss may be temporary due to infection, or permanent.</p> <p>Students may:</p> <ul style="list-style-type: none"> • have difficulty with oral communication • confuse sounds • misunderstand or partially misunderstand oral instructions and/or conversation • have a language delay (oral and written) impacting on spelling and reading. 	<p>Teachers may:</p> <ul style="list-style-type: none"> • refer students for regular hearing assessments • face students when speaking • use facial expressions, hand gestures and body language whenever possible • be aware of position; do not stand against the window; ensure that lighting is adequate • avoid simultaneous walking and talking • encourage students to communicate using the method they feel most comfortable with • speak with moderate speed and tone • seat students close to the teacher • give clear and short instructions supported by a visual prompt • provide written instructions • provide a lesson preview in advance • give extra time for reading and writing • mark/grade written work for content • teach spelling through visual strategies • record main points visually for students during class discussion in printed notes and on the board • train students to follow the rule that only one person speaks at a time. 	<ul style="list-style-type: none"> • Hearing aids • Assistant note taker • Tape recorders • Spellcheckers • Interpreter/communicator/finger speller/signer • Overhead transparencies • Sign language • Consultation with hearing specialist • Specialist equipment (training and maintenance) • Visuals such as maps, charts and slides • Subtitled videos or films

Nature of difficulty and implications for learner	Teaching strategies	Resources
<p>Poor/fluctuating attention</p> <p>Students may:</p> <ul style="list-style-type: none"> • be highly distractible • be easily frustrated and anxious • have angry outbursts • lack confidence. 	<p>Teachers may:</p> <ul style="list-style-type: none"> • when in need of students' attention, approach students, call their name and gently tap them on the shoulder • give hands-on activities as much as possible • give frequent breaks • ensure the room is free from external or internal noise as much as possible • clearly signal change in tasks, end of lesson etc • take every opportunity to praise and encourage good performance and positive behaviour • try wherever possible to anticipate and defuse situations that cause stress and anxiety • ask students for their input as to what will help them the most • enlist class support for students. 	
<p>Total loss of hearing</p> <p>Students may:</p> <ul style="list-style-type: none"> • have some speech that is difficult to understand • have no speech • need sign language or other alternative means of communication • become very stressed • be hypersensitive to others' reactions. 	<p>Teachers may:</p> <ul style="list-style-type: none"> • refer to specialist for advice • provide additional classroom support (eg appropriately trained assistant) • consider the teaching strategies listed above. 	

Specific learning difficulties

Specific learning difficulties include significant difficulties in reading, writing, spelling or manipulating numbers associated with difficulties in processing symbolic language (eg dyslexia, dyscalculia, music notation). It should be remembered that students will tire easily and become distracted. Students may also or only demonstrate difficulties in organizational skills and time management.

See the *Candidates with Special Assessment Needs* booklet for details of special arrangements and accommodations for all of the following difficulties. These special arrangements and accommodations should be classroom practice.

Dyslexia

Dyslexia refers to difficulties students may have with reading and writing text.

Nature of difficulty and implications for learner	Teaching strategies	Resources
<p>Reading</p> <p>Students may:</p> <ul style="list-style-type: none"> • have a reading level at least two years below their chronological age • lose their reading place easily and jump lines • have poor reading comprehension • over rely on pictures and contextual clues • have poor fluency and slow reading speed • have poor word attack skills • ignore punctuation • reverse words and letters • skip/repeat certain words • find it difficult to read aloud in class. 	<p>Teachers may:</p> <ul style="list-style-type: none"> • use simplified text wherever possible • divide reading into sections and check for understanding after each section • encourage/allow use of a ruler or paper guide when reading • pre-teach or provide subject-specific vocabulary • allow extra time for both reading and comprehension • allow reading aloud to be voluntary • give opportunity for rehearsal before reading aloud • increase print size to help the reader • use coloured paper for print material to aid print discrimination. 	<ul style="list-style-type: none"> • Specialist(s) for assessment and support • Texts on tape • Special needs teacher for support resources and support in class • Parents wherever possible to assist with reading practice • Peer reader • Time-management strategies • Coloured papers/filters • Line markers • Rulers/guides • Computer software

Nature of difficulty and implications for learner	Teaching strategies	Resources
<p>Writing skills</p> <p>Students may:</p> <ul style="list-style-type: none"> • show a discrepancy between spoken and written language • have difficulties beginning writing tasks • have difficulties organizing the structure of their writing tasks • have word-finding difficulties that could lead to inappropriate use of vocabulary • have unusual and erratic spelling patterns • have difficulties writing at length • have difficulties proofreading all aspects of written work • have difficulties copying from the board. 	<p>Teachers may:</p> <ul style="list-style-type: none"> • be aware of organization and presentation of written work on the board and in handouts • use planning structures (graphic organizers or mind maps) to develop writing • encourage use of information and communication technology • provide written photocopied notes of key concepts covered in class • accept that spelling is a difficulty • mark only key vocabulary when correcting and offer a correct model when wrong • insist that students must write the whole word when correcting spelling errors • use alternative methods of presentation and assessment (eg tape recorders, Dictaphones, voice-activated software). 	<ul style="list-style-type: none"> • Special needs teacher • Spelling course • Scribe/amanuensis • Word processor • Appropriate software • Peer scribe • Peer proofreader • Organizational aids • Writing frames

Specific learning difficulties

Dysgraphia

Dysgraphia is associated with handwriting difficulties such as letter formation, layout of letters on a page and physical tiredness.

Nature of difficulty and implications for learner	Teaching strategies	Resources
<p>Handwriting</p> <p>Students may:</p> <ul style="list-style-type: none"> • have poor pen or pencil grip • have poor eye–hand coordination • find writing physically painful and tiring • be slow in written output • be reluctant to write at length • still be printing • have inappropriate letter formation • have writing that is often illegible • be stressed. 	<p>Teachers may:</p> <ul style="list-style-type: none"> • allow students to hand in typed work • encourage double spacing in drafts for easy correction • remind students of importance of posture and pencil grip • allow extra time for written work • accept any handwriting style that is legible • ensure handwriting does not impede the expression of ideas. 	<ul style="list-style-type: none"> • Special needs teacher • Scribe/amanuensis • Word processor • Appropriate software • Peer scribe • Pencil grips • Letter/handwriting guides

Specific learning difficulties

Dyscalculia

Dyscalculia is when a student has great difficulty with mathematical symbols, the steps within a process, the abstract concepts, memorizing formulae, and so on.

Nature of difficulty and implications for learner	Teaching strategies	Resources
<p>Arithmetic/mathematics</p> <p>Students may:</p> <ul style="list-style-type: none"> • have difficulties with mental arithmetic • have difficulties with learning multiplication tables and using them fluently • have difficulties learning to tell the time • show symbol confusion and number reversals • have difficulties understanding everyday words used in a mathematical context (eg field, plot, table) • demonstrate spatial and tracking difficulties • have difficulties with orientation of geometrical shapes • have difficulties with setting out problems • have difficulties with sequencing steps to solve a problem • have reading difficulties that affect the understanding and solving of word problems. 	<p>Teachers may:</p> <ul style="list-style-type: none"> • use concrete examples and materials to ensure students understand the processes involved • provide visual reminders of the process and show step-by-step instructions • allow the use of a calculator or multiplication table • provide and explain glossary of terminology • allow extra time • provide the time for error analysis • allow and train students to use paper guides • colour code mathematical symbols • encourage the use of a ruler or guide for tracking • encourage accuracy and decrease the number of problems testing the same skill. 	<ul style="list-style-type: none"> • Concrete materials (manipulatives) • Calculators • Visual aids • Paper guides • Organizational aids

Specific learning difficulties

Memory

Memory difficulties include short-term, working and long-term memory problems in retaining important details and processes.

Nature of difficulty and implications for learner	Teaching strategies	Resources
<p>Auditory memory</p> <p>Students may have difficulty:</p> <ul style="list-style-type: none"> • maintaining attention when information is given verbally • remembering and processing spoken information • holding auditory information in short-term memory • following main points in the discussion • carrying out complex verbal instructions. 	<p>Teachers may:</p> <ul style="list-style-type: none"> • break instructions into smaller parts • provide visual back-up of key points • repeat instructions as necessary • alert students when important instructions/concepts are about to be given • provide instructions in writing where possible • discreetly ask students to repeat key points/instructions to ensure understanding • provide alternative strategies to support memory (eg mind mapping, highlighting or annotating handouts) • simplify instructions into plain English. 	<ul style="list-style-type: none"> • Graphic organizers • Dictaphones • Calculators • Highlighters • Coloured pencils • Checklist proformas • Information and communication technology • Specialist support
<p>Visual memory</p> <p>Students may have difficulty:</p> <ul style="list-style-type: none"> • processing and recalling information given visually • with spatial relationships and orientation, maps and directions, and geographic layout • identifying fine and subtle visual detail • using visual spelling strategies • detecting spelling errors. 	<p>Teachers may:</p> <ul style="list-style-type: none"> • provide both auditory and written instructions to provide additional support • anticipate situations that might prove difficult for students • promote the use of mnemonics and rhymes • promote the use of colour • promote the use of enlarged varied fonts • teach visualization techniques. 	<ul style="list-style-type: none"> • Spellchecker • Dictaphone • Coloured pencils • Highlighters • Specialist support

Specific learning difficulties

Information processing difficulties

Information processing difficulties include the ability to grasp facts quickly and convert them into other forms either verbal or written. There is a time delay for students in this process that goes beyond the expected response time. (See also communication and speech disorders.)

Nature of difficulty and implications for learner	Teaching strategies	Resources
<p>Information processing difficulties</p> <p>Students may:</p> <ul style="list-style-type: none"> • need more time to understand and accomplish tasks • need clarification • need more repetition for important points to be memorized • misunderstand information, questions or assignments • produce more simplistic written work than expected due to problems with processing rather than lack of effort. 	<p>Teachers may:</p> <ul style="list-style-type: none"> • provide models and structures of expected outcomes such as laboratory reports and essays • allow for extra time in responses and tasks • use the following questioning technique: name (pause), pose question (pause), response, acknowledge and praise • discreetly check students' understanding and repeat instructions if necessary. 	<ul style="list-style-type: none"> • Samples of formats used (eg laboratory report, essay structure) • Good models of past work as guides

Specific learning difficulties

Dyspraxia

Dyspraxia is immaturity with organization of movement and thought: sometimes referred to as “clumsy child syndrome”. It should be remembered that students with dyspraxia will tire easily and become distracted. These students may also or only demonstrate difficulties in organizational skills and time management. Dyspraxia can be linked with other aspects of specific learning difficulties.

See the *Candidates with Special Assessment Needs* booklet for details of special arrangements and accommodations for all of the following difficulties. These special arrangements should be classroom practice.

Nature of difficulty and implications for learner	Teaching strategies	Resources
<p>Delay in motor milestones (eg hopping, skipping, catching a ball, riding a bike)</p> <p>Students may:</p> <ul style="list-style-type: none"> exhibit “clumsy” behaviour that presents a health and safety risk when using cutting instruments, chemicals etc show delays in the acquisition of physical education skills that may lead to reluctance to take part/avoidance, clowning-type behaviours, and vulnerability to bullying have emotional and social problems possibly caused by them finding it hard to get around (unable to ride a bike), join in the latest trend (mastering skateboarding) or cope with unusual equipment/settings (on a school camping trip) drop things often be messy when eating. 	<p>Teachers may:</p> <ul style="list-style-type: none"> establish additional planning and safety routines in subjects that involve the handling of dangerous materials or equipment (eg art, design and technology, science, food science) be aware that while dyspraxic students will try to “take care”, they may lack the hand control or perceptual judgment to carry out a task without error offer adequately differentiated physical tasks developing skill building, especially in physical education teach physical skills when students are developmentally ready excuse dyspraxic students from undertaking activities beyond their physical ability be aware of the fear and stress that physical activity may generate. 	<ul style="list-style-type: none"> Occupational or sensory integration therapist Support personnel may be necessary in the classroom or activity room to support learning, health and safety routines Parents to reinforce motor skills at home, at weekends and in holidays Parents to help with organizational routines, back-up set of equipment, clothing etc Handwriting tools: <ul style="list-style-type: none"> pencil grips moulded pen grips keyboard training software
<p>Difficulty with dressing (eg buttons, laces)</p> <p>Students may:</p> <ul style="list-style-type: none"> have difficulties with dressing that may lead to time-management problems have untidy personal presentation be vulnerable to bullying. 	<p>Teachers may:</p> <ul style="list-style-type: none"> discreetly allow additional time where a change of clothes is required praise positive aspects of appearance avoid making unrealistic demands regarding tidiness and personal presentation. 	<p>For very young children, dolls and puppets with buttons, zippers and Velcro.</p>

Nature of difficulty and implications for learner	Teaching strategies	Resources
<p>Poor handwriting</p> <p>Students may:</p> <ul style="list-style-type: none"> • have untidily presented handwritten work • have problems with management of time resulting in work being rushed, unfinished or late, thereby affecting the quality of outcome and self-esteem. 	<p>Teachers may:</p> <ul style="list-style-type: none"> • ensure that handwriting is taught and practised • ask for less or allow an alternative method of presentation if speed of production is a problem • teach older students the use of abbreviations • offer class notes that can be annotated to alleviate the pressure of note taking • teach and allow the use of keyboard skills • consider the use of all new information and communication technology • allow special concessions in class work, internal assessment and external examinations • set differentiated written tasks for quantity or quality or perhaps an alternative method of presentation (slide show, cloze exercise). 	<p>Students may be entitled to special concessions in examinations.</p> <p>Refer to <i>Candidates with Special Assessment Needs</i> booklet.</p>
<p>Poor awareness of space</p> <p>Students may demonstrate:</p> <ul style="list-style-type: none"> • poor spatial skills that mean they get disorientated or delayed moving around even in a familiar environment • poor awareness of another individual's personal space that may lead to conflict. 	<p>Teachers may:</p> <ul style="list-style-type: none"> • offer maps with coloured lines marking the route between classes or appoint a student guide • be aware and ready to defuse any problems around this issue. 	
<p>Poor motor planning</p> <p>Students may:</p> <ul style="list-style-type: none"> • have difficulties mastering a musical instrument that has very precise note positions but no markers, or where different finger positions are required for different keys. 	<p>Teachers may:</p> <ul style="list-style-type: none"> • enlist class understanding of specific motor problems • be particularly aware how adolescent growth spurts can increase motor problems • be aware that some instruments can create more problems • never say "No" but, "Give it a try". 	