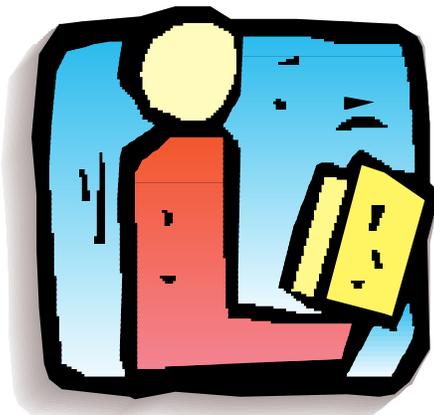




Resource for the Identification and Teaching of Students with Specific Learning Disability



New  Nouveau
Brunswick

Department of Education,
Student Services (Anglophone)
P.O. Box 6000, Fredericton, N.B., E3B 5H1
(506) 453-2816 November 1999

Table of Contents

1. Introduction	3
2. Assessment	11
3. Assessment Forms	21
4. Characteristics of Specific Deficit Areas with Teaching Methods and Evaluation Techniques	47
5. Development of a Special Education Plan for a Student with Specific Learning Disability	69
6. Parents' Role/Coping Strategies	71
7. Assistive Technology/Transition	73
8. Resources	
• Short-Term Remedial Methods for K-3	75
• Developing Phonological Awareness: Sequential Examples	77
• Accommodations	79
• Websites	80
• Videos	80
• Other Resources	80
• Answer Key for Examples of Processing Difficulties	82
9. Bibliography	83

Acknowledgements

The Department of Education wishes to acknowledge the contribution of the following people toward the development of this document. Their time, effort, and sharing of expertise is highly valued.

Kate McLellan (Chair)
Consultant for Students with Exceptionalities,
Department of Education

Joan Hogan
APSEA Supervisor for Hearing Impaired,
Department of Education

Ed Jones
Supervisor of Student Services,
School District 16

Susan McConnell
LD Consultant, Resource Teacher,
School District 6

Kaye Eagen
Resource Teacher, Magnetic Hill School,
School District 2

Mary Hooper
Resource Teacher, St. George Elementary,
School District 10

Copyright Ownership

Care has been taken to trace ownership of copyright material contained in this resource book. Any information that will allow the New Brunswick Department of Education to rectify any reference or credit in subsequent editions would be gratefully received by the Consultant for Students with Exceptionalities, New Brunswick Department of Education, P.O. Box 6000, Fredericton, N.B. E3B 5H1

Introduction

Purpose

The Department of Education supports the inclusion of children with exceptional needs into the regular classroom setting. However, the identification of specific learning patterns, as well as specific strengths and needs, is needed in order to purposefully plan for the variety of diverse learners in our classrooms.

Since students with Specific Learning Disability make up approximately five to fifteen percent of any population, the Department of Education recognizes the need to provide practical information for teachers with regard to the characteristics associated with Specific Learning Disability, and information regarding practical teaching methods and strategies for addressing the needs of these specific learners.

This document has been developed in response to this need. It provides teachers with background information about the characteristics associated with various types of Specific Learning Disability. It suggests methods for informal and formal assessment of these students. It presents guidelines for the development of Special Education Plans that address the needs of these students and suggests various resources appropriate for their learning needs. The document also recommends ways of incorporating parental involvement in the planning process.

Ultimately, the teacher of children with Specific Learning Disability will recognize the uniqueness of the children's learning needs and will consider his or her methods of presentation and evaluation, that will allow the children to show knowledge of the content of what is being taught and its inherent concepts, while continuing to stimulate the children's average to above-average intellectual ability. The teacher must remember that, although these children have difficulty in specific areas, if given the opportunity, they can

develop their creativity and knowledge to a level consistent with the other children in their class, although they will not always be expected to express it in the same manner. Methods of evaluation based on appropriate expectations are key to addressing the needs of children with Specific Learning Disability. Remember, "fairness" does not mean that everyone receives the same, what "fairness" actually means is everyone receiving what he or she *needs*. (Richard Lavoie, "How Difficult Can This Be?")

In order to accomplish "fair" evaluation, the teacher must embrace the philosophies inherent in the theories of Multiple Intelligences (Howard Gardner), Learning Styles (Dunn & Dunn), Quantum Learning (DePorter, Reardon, Singer-Nourie), and other preference-based learning theories, and vary the presentation methods, activities and evaluations to suit the strengths of the children in the classroom.

The goal in developing methods and strategies for children with processing deficits is to assist them by circumventing the difficulty through methods and presentations that use other strength areas. In addition to this, particularly in the early years, children with learning disabilities often need explicit intervention, depending on the nature of their processing difficulty.

Teachers who are sensitive to the needs of children with Specific Learning Disability can have significant impact on these children and give them a positive life-long effect on their ability to meet their potential.

Definition

Learning disabilities is a general term that refers to a group of disorders which are due to identifiable or inferred central nervous system dysfunction, which may be manifested by delays in early development and/or difficulties in any of the following areas: attention, memory, reasoning, co-ordination, communicating, spelling, calculation, social competence, and emotional maturation.

Learning disabilities are intrinsic to the individual and may affect learning and behaviour in any individual of average or above- average intelligence.

Learning disabilities are not due primarily to visual, hearing, motor or cognitive impairments, or to emotional disturbance or environmental disadvantage. Learning disabilities may arise from genetic or bio-chemical factors or events resulting in neurological impairment.

(Adapted from *Learning Disabilities Association of Canada* definition 1988)

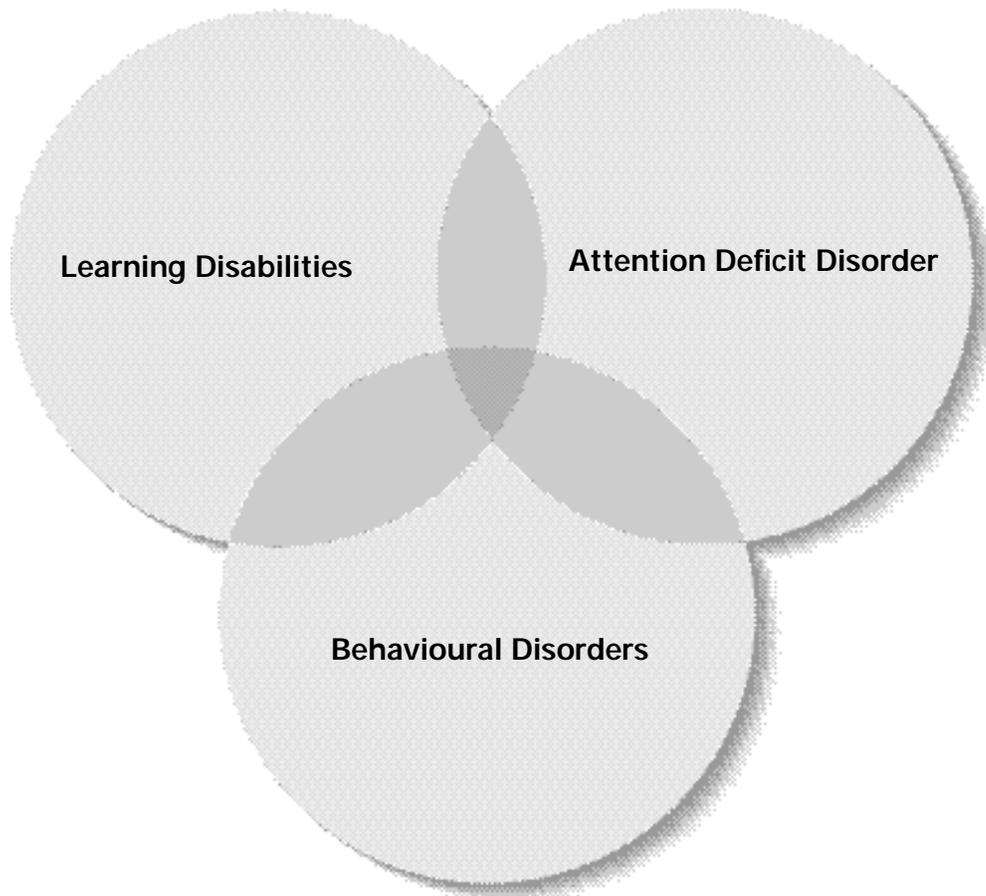
In other words:

A child with learning disabilities is one who possesses average to above-average ability , and often displays a discrepancy between academic achievement and intellectual ability.

Learning disabilities are not primarily the result of

- sensory impairment
- physical challenges
- developmental delay
- emotional disturbance
- environmental influences

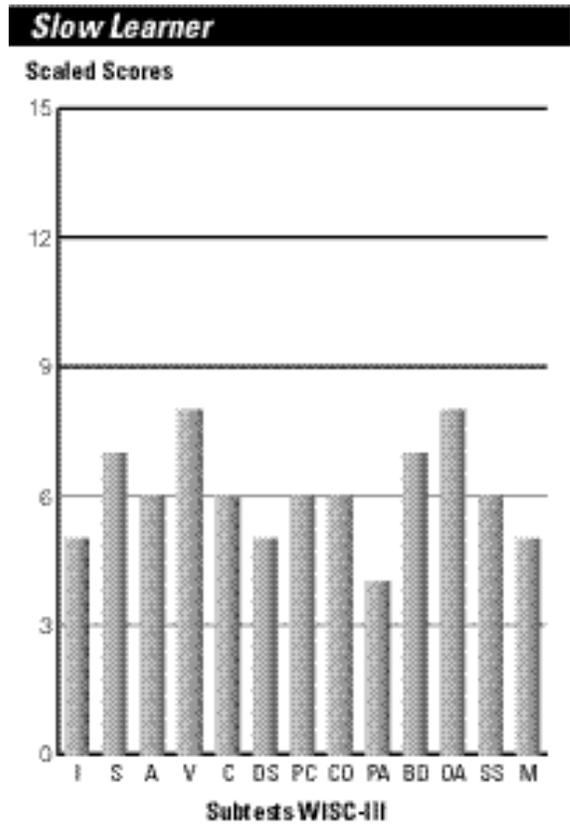
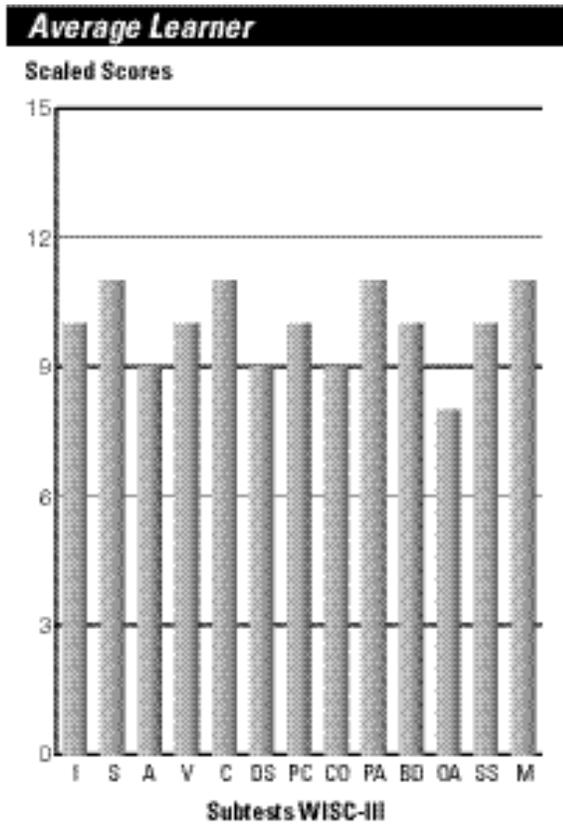
Learning disabilities, Attention Deficit Disorder, behaviour disorders, etc. can be separate or co-existing conditions. Other behavioural or personality disorders can develop as secondary characteristics. As such it is essential to recognize these secondary traits as well as address the primary difficulties.



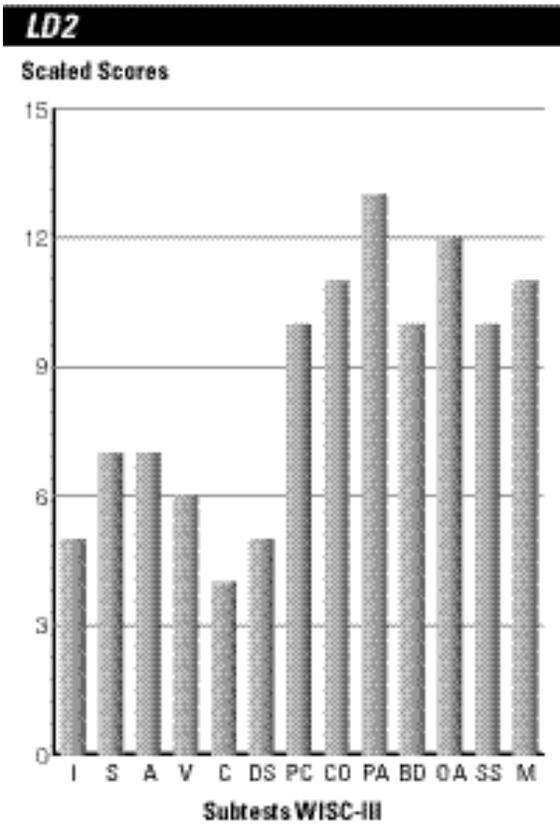
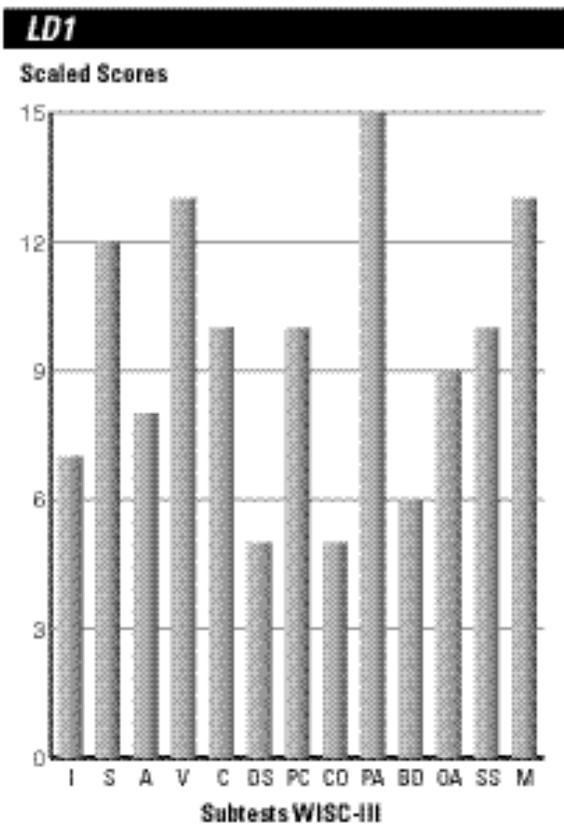
The graphs on the following pages display typical profiles of intellectual function and learning patterns as seen on the **Wechsler Intelligence Scale for Children-III**, for an average learner, a slower learner, and for the child with learning disabilities.

Average Learner: Note that the profile is relatively even, and typically does not vary significantly from the average range, i.e. scaled score of 8-12.

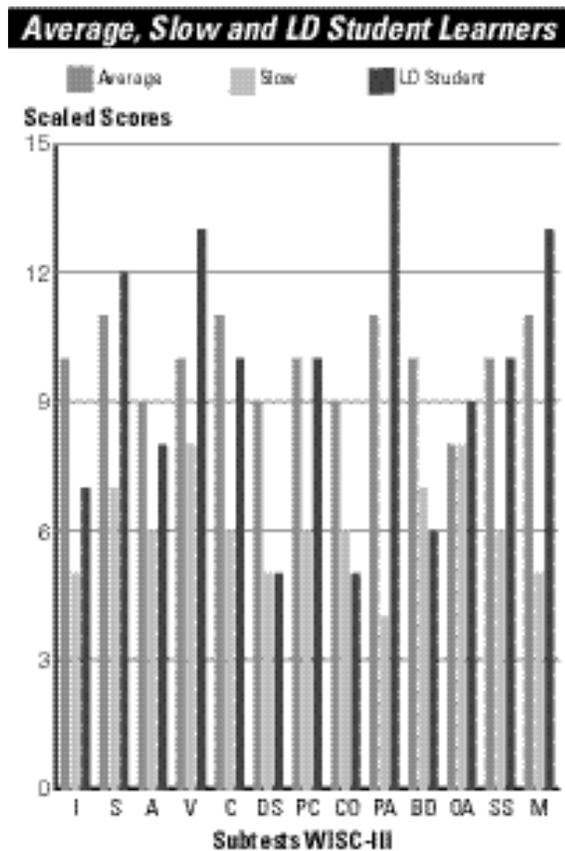
Slow Learner: Note that the profile is relatively even and typically does not vary significantly from the below-average range, i.e. below scaled score of 8.



Learner with Learning Disability: Two examples are given. In the first example, the child would score within the average range overall, but note that the profile shows many areas of significant strength and weakness in both verbal and performance areas. In the second example, the profile shows a child with learning disabilities who also has an overall score falling within the average range, but note the significant weaknesses in language-related areas, as compared to the non-verbal, performance areas, which are much stronger.



Comparison: The last chart shows comparisons among the different types of learners.



Processing Information

What is it we really ask a student to do when we ask him or her to follow a direction or process information to give us some sort of product? Often we only recognize the output of any processing task, but actually the job of processing is much more complicated than we realize.

Consider a simple task such as asking a student to write down spelling words as you call them out.

Initially, there are attention factors that we need to consider. In this situation, the student must filter out or suppress all the unnecessary visual information that he or she doesn't need in order to focus on the task. The student must be able to look at the teacher while he or she is giving directions, locate a pencil or pen on the desk with his or her eyes, and find the correct place on the page to print the spelling words. The student must be able to ignore the colourful posters and pictures on the wall, the movement of a fellow-student next to him or her, or the toys that are sitting just within visual range.

The student must also filter out all unnecessary auditory information that he or she doesn't need in order to focus on the task. The sound of a desk moving, paper shuffling, air conditioners rattling and the like make it difficult for the student to focus his or her attention on the directions or message the teacher is giving. The student needs to be able to ignore or suppress this auditory information and focus on the teacher's words.

The student also has to suppress needless tactile or kinesthetic information. He or she needs to focus attention on the teacher, rather than on the itchy sweater being worn or the coldness of the room.

Even in this initial stage of information processing, there is more to consider than is apparent.

If the student has had the ability to focus his or her attention on the task at hand, then the brain begins processing the information. Perception, memory, organization, and comprehension are intrinsic to this process.

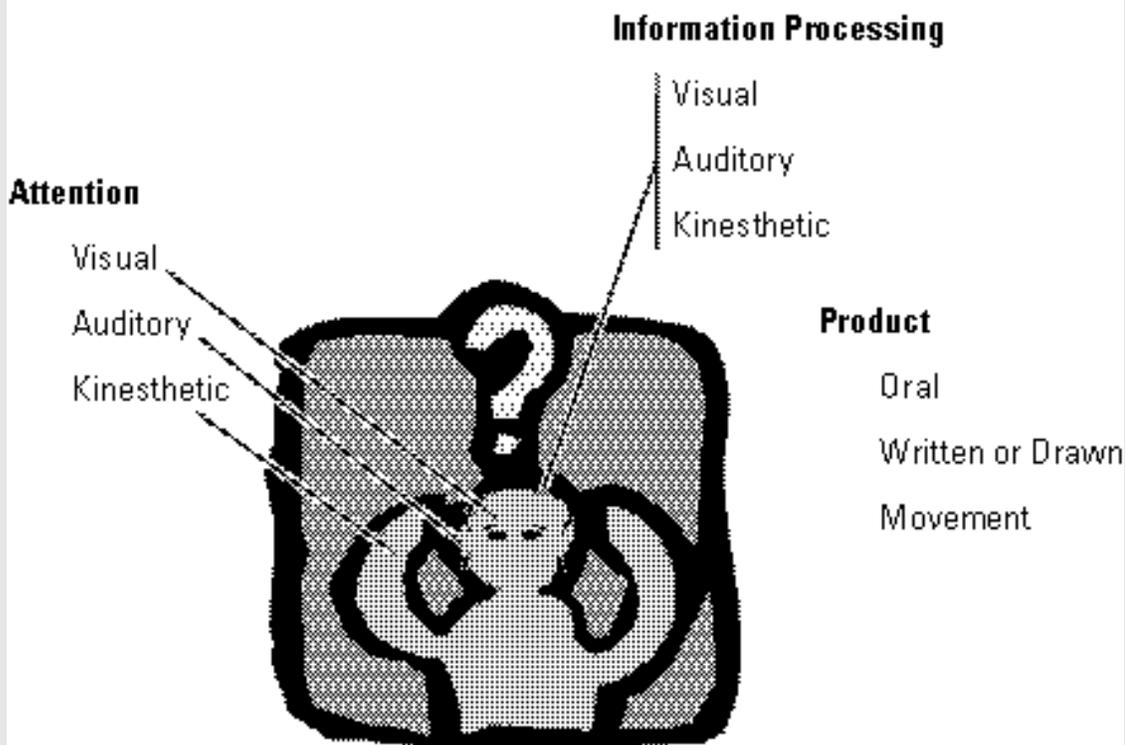
The student, apart from visual acuity, must be able to appropriately perceive, without distortion, the visual information that has been presented. Often students with a disability will misperceive the visual information, and the image becomes distorted or disoriented. Students will sometimes describe the words as falling off the page, or parts of the words as disappearing. Often reversals, inversions and transpositions are evident. Obviously this kind of difficulty would send mixed messages to the brain and make comprehension difficult.

Visual memory is also a part of information processing. The student must be able to match the word being said to a "picture" of the word in his or her memory. The task then remains to translate this "picture" to written form on the page without additions, distortions, or omissions.

This task also asks the student to perceive the string of sounds that are being heard, without distortion or disorientation, in the correct sequence, and match those sounds with vocabulary words stored in memory, in order to comprehend and follow the directions given.

Finally, once the visual and auditory information has been processed and the memory accessed, the student needs to match that processing with a motor output by remembering what it feels like to form specific letters with pencil or pen on a page. This last stage involves visual-motor processing.

The Learning Process: A Model for Processing Information



Once processing is complete, generally we require some sort of output for evaluation. This is usually verbal, as we ask the student to respond by speaking; or, as in the case of the spelling exercise, it is a motor output, in this case printing or writing. Often the output reflects the deficits in the mode of processing, the part we can't see.

How Difficult Can This Be?

Learning disabilities are often called the “invisible handicap” because it is difficult for people to understand just exactly what a student with a learning disability sees, hears, or feels that is different from what we would experience. It's easy to recognize a physical handicap, as often an assistive device is evident, but with a learning disability there is no device present, and children with learning disabilities are often not recognized as such, but rather are seen as “lazy” or “unmotivated.” The video “**How Difficult Can This Be?**,” provided with the resourcebook, attempts to help viewers experience what it is like to have a learning disability and therefore understand the concept at a far deeper level.

(Please take the time to view the video “How Difficult Can This Be?,” provided to each district Supervisor of Student Services with this resourcebook.)

Characteristics of Children with Specific Learning Disability

Areas of specific learning disability can be categorized in many ways, but, for the purposes of this resourcebook, the following categories will be used:

- Attention deficit
- Auditory-processing deficit
- Visual-processing deficit
- Visual-Spatial deficit (with or without motor difficulties)
- Written -expression deficit
- Language deficit
- Mathematics deficit
- Organizational deficit
- Memory deficit



Example of Difficulty with Visual Processing when Reading

Try to read the following passage. Note that letters can be off line, reversed, inverted, transposed, or improperly spaced. What you will experience is the same frustration a student with a visual-processing deficit experiences when he or she attempts to read. Obviously this type of deficit is a detriment to the acquisition of reading, and why many students with this type of deficit have reading disabilities.

D u r e e e s t o o t h e t e
y o y o m m d e r t h r y f h r e
d l l b t r u f f ? h e w a g i l l y d o a t , a
i o a s b T e r s a b d i
m b b e s i z e b g i l l y g t , i t t l n
i l o a a n b a l e o e .
e t e b e e g r
W e y w a n s o u i c e e r e y
h n t h m n g a s s , t h
o n l w a l k o s s e i b g e e l b w h
w d a c r t h d r t o a f i e r e
e b r s w a l l a n u t b u e s s
t h a s s t a b g r e e n . B
o l i v e b e g Y t w s a
w h u n b r t h e d r i b e ? e s , i a
l l .
t r o

See answer key in Resource section

Example of a Language Deficit when Reading

Read the following paragraph and answer the questions. In this case the student's language deficit involves making meaning of words. His or her ability to recognize and process structure is intact. These students are hard to detect in a classroom, as they may be able to complete a fact-finding exercise, as you will see; however, they will not have understood what they read because they could not process the language.

Blix and Splox grummed blantly as they bronted along. The cront was jilp and because of this Blix and Splox were sniped with their bluxy drant.

1. Who were the main characters?
2. What did Blix and Splox do as they bronted along?
3. Why were Blix and Splox sniped?
4. With what were Blix and Splox sniped?

See answer key in Resource section

Example of Difficulty with Comprehension of Visual Material

Read the following passage silently, then read it aloud and choose the one that makes more sense to you. This example shows the case of students who can read, but make no sense of what they have read until they hear the passage read aloud. These are the students who need information read to them or available on tape.

Ladle Rat Rotten Hut

(heresy ladle furry starry toiling udder warts-warts welcher alter girdle defferent fimer once inner regional verging)

Wants pawn term dare worsted ladle gull hoe lift wetter murder inner ladle cordage honor itch offer lodge, dock, florist. Disk ladle gull orphan worry putty ladle rat cluck wetter ladle rat hut, an fur disk raisin pimple colder Ladle Rat Rotten Hut.

Wan moaning Ladle Rat Totten Hut's murder colder inset "Ladle Rat Rotten Hut, heresy ladle basking winsome burden barter an shirker cockles. Tick disk ladle basking tutor cordage offer groin murder hoe lifts honor udder site offer...

See answer key in Resource section

Assessment

Assessment is an ongoing process involving the collection of data for the purpose of evaluating the performance of a student. The classroom teacher is in the best position to provide information on a current basis. Observation, work samples, student portfolios, journal entries or logs, project work, interview results, daily or weekly tests, criterion-referenced tests such as the provincial assessments, and standardized tests, whether group or individual, are all valid examples of assessment, and therefore are all appropriate in assisting the teacher to determine the best approach to programming for his or her students.

Observation

To assist teachers in identifying the children who they perceive are experiencing learning difficulties, general observations may be made in the classroom that are invaluable in helping to pinpoint characteristic weaknesses and strengths. Such observation will require the classroom teacher to be on the lookout for common behavioural characteristics of children with Specific Learning Disability. Observation is the first step in the assessment process.

Much common behaviour can be observed in children with Specific Learning Disability. The teacher should begin by looking for the students who, when attempting to copy or write in class, are often unable to form letters properly, may start in odd places on the page, may appear to have difficulty copying from the board, and are generally slower than others to complete their work. Also, the teacher should look for the students who will regularly have difficulty understanding what they have read and may be unable to follow directions easily. Also, teachers should be aware of the students who display an inability to focus their attention for long periods or may appear to be easily distracted. Teachers should try to discern those children who have difficulties related to memory. The students with

memory-processing difficulties will often display an inability to recall information (e.g. often not recalling concepts taught yesterday or not recalling concepts over long periods of time).

Teachers should also observe the level of social awareness evident in the children in their classroom. Children with learning disabilities often either show very dominant/aggressive characteristics with their peers, or they appear passive/submissive in the school environment. Because these children have difficulty interpreting their external environment, they may miss or misperceive the social cues around them. In considering these behaviours, teachers should be careful not to misinterpret a lack of social skills as immaturity, and vice versa.

The teacher should be aware of the children who have difficulty finding a way out of difficult situations to the point that they become angry or “shut down.” Children who display these behaviour patterns often have difficulty with logical processing. This inability to problem solve will also be evident in their approach to a school task in that they may be unable to follow a step-by-step procedure to reach a working conclusion.

Use the observation report form in the next section to assist you with your observations.

Work Samples

The next important step in the assessment process is to consider samples of the children’s output in response to a given task. This may be presented orally, in written form, or through movement. Children with Specific Learning Disability often display very obvious characteristics in their output samples.

General Language Usage

Children with learning disabilities frequently have difficulty with the language in the classroom. They will not readily follow oral directions and explanations. The reading requirements may involve vocabulary too

technical and well beyond the children's receptive language capabilities. Children with learning disabilities may have communication difficulties related to a weakness in their ability to express what they feel.

Expressive Language

General language usage can be identified in expressive-language production. Students experiencing difficulty with expressive language may have difficulty with word finding, often displaying a limited oral vocabulary. They may not be proficient at participating in conversation with others, and therefore may appear quiet or shy. The children's language production may show a tendency toward fragmented sentences, as well as difficulties with syntax, with pronouns and/or with verb agreement. Language production may often contain omitted or mispronounced words in conversation. They may have particular difficulty answering who, what, when, where and why questions, as the language of questioning and the purpose of these words are confusing to them.

Written Language

Written language is also a form of expressive language production. Students experiencing difficulty with written language may have difficulty with any one of the many facets of the task. These students will display difficulty with expression and sequencing of thoughts and ideas, with structure in sentences and paragraphs, and also with word order and verb agreement. Frequently the students' written expressive vocabulary will lag behind oral expressive vocabulary. Written responses produced by these children will tend to be very brief. Word omissions, additions, or substitutions in the written product will be frequent. Written language mechanics such as capitalization and punctuation will prove a struggle for the students with learning disabilities who have processing difficulties in this area.

Spelling

Spelling, a specific form of written language, will point to other forms of processing difficulties. The phonemic/graphemic association of words required for spelling frequently causes difficulties for students with learning disabilities, particularly those who have auditory- processing weaknesses. The spelling of these students will, on a regular basis, bear no resemblance to the correct spelling of a word. Words having irregular spelling patterns will cause notable difficulty for children with learning disabilities. Spelling, particularly in daily writing, will evidence omissions, substitutions, additions, and rearrangements of letters or sound units. The children will have distinct difficulty with activities that ask them to analyse sounds in words. These children may do well on regular spelling lists, but there is often little or no carry-over to daily work, or over time. Asking these children to write a lengthy, end-of-a-unit spelling test is usually courting disaster, and is, therefore, inappropriate for them.

Math

Characteristic difficulties can also be evident in math. Although some students with learning disabilities may display weakness in both language-related and math areas, some students with learning disabilities who are very articulate and whose oral and written language is generally at a high level may experience processing difficulty with math concepts. The teacher should be particularly wary of this type of pattern and try not to prejudge the children's math ability, on the basis of their language level. Students experiencing difficulty with math will display the processing weakness in a number of ways. In math computation, weaknesses may be seen in long-term memory for math facts, in sequencing the steps in computation problems, in organizing or lining up numbers, in recognizing place value, in dealing with money, time or measurement, and in estimating. Difficulty in attending to the proper operational sign is also often a recurring error.

In the area of the application of math concepts, children with learning disabilities will often choose an incorrect operation when faced with a problem, or will often have difficulty solving multi-step problems, and, in doing so, omit a step or complete a step out of order.

Visual-Motor Integration/Kinesthetic Output

Children who experience problems related to visual-motor integration have gross and fine motor difficulty. They will often display difficulty with simple tasks such as tying their shoes. The children with a weakness in visual-motor integration will often appear clumsy and will most likely find copying or writing a chore. Work samples from these children will often show inconsistency in letter formation or size. Copying from near or far point within a reasonable amount of time or with satisfactory accuracy will often prove an insurmountable task. Work will not be well organized on the paper. The teacher will find that the move from manuscript to cursive writing is not an easy transition for these children.

Use the work sample report form in the next section to assist you with your evaluation of work samples.

Assessment Tools

Informal Reading Inventory

One very valuable form of informal assessment, the informal reading inventory (IRI), can be broken into components that accommodate a teacher's schedule. Inventories can be teacher-made, using the available reading material or a published reading series in use in the classroom. Inventories are also available in published form, e.g. *Silvaroli*.

When an inventory is administered, usually an oral, a silent and a listening comprehension passage are presented; however, depending on a teacher's schedule, these tests may be administered at different times. An inventory can give an approximate grade level for reading.

This option is usually available in the published materials, but with classroom materials the teacher is responsible for collecting and sorting the reading material for this purpose.

A published informal reading inventory is a type of informal assessment designed to provide the teacher or examiner with a variety of information regarding a student's reading ability. It can be used to determine the approximate reading level at which the child is totally comfortable; a level at which the child is learning and therefore encounters some, but not insurmountable, difficulties; and a level that is too difficult for the child, and at which he or she finds significant frustration. These levels are referred to as the ***Independent Level***, the ***Instructional Level***, and the ***Frustration Level***. These levels can be determined for both isolated decoding skills and for reading in context. Some IRI's provide enough alternative forms to allow a determination of an approximate listening level as well.

Most IRI's have a number of graded word lists. The instructional level at which the child operates with these lists gives an indication to the examiner as to where to begin when administering the graded reading passages. Another important aspect of the graded word lists is that they allow for an analysis of errors, which then provides diagnostic information to the teacher or examiner.

Most IRI's also contain graded passages that allow for a calculation of word accuracy in context, for miscue analysis, and for an evaluation of comprehension through questioning.

As a general rule of thumb, 3-4 errors out of 20 words in a list, or approximately 90-95% word accuracy when reading a passage is considered an instructional level. For comprehension, the general rule of thumb is approximately 70-75% comprehension for an instructional level. Each test may differ slightly, but, when using an IRI that does not state the criterion levels, the above percentages are adequate.

Graded Word List

Generally, graded word lists as contained in IRI's, tests such as the *Brigance*, or published lists such as the *Dolch* have a range from kindergarten level to grade 12.

Frequently, a significant shift occurs in the difficulty and types of words encountered after the third-grade level. Prior to this level, many children rely heavily on their sight word vocabulary. Generally, from the fourth-grade level and on, the students are required to use their strategies for decoding unknown words to a greater extent. As such is the case, even though children may do very well (independent level) on a third-grade reading list, they may experience frustration when attempting the fourth-grade level list.

If this happens, the teacher can hypothesize that a basic sight vocabulary has been established, but more comprehensive word attack strategies have not been developed to assist the children when encountering new and more difficult words.

When administering word lists, the teacher should make a check mark next to the word when the child has read the word correctly, and write the pronunciation of the word that has been read if the word has been read incorrectly. This can be later used for analysis.

When analysing the errors from a word list, the teacher should make note of any pattern of errors that are seen. These patterns may include, but are not limited to, some of the following:

- Miscue is visually similar to the stimulus word, indicating that the child is relying on his visual memory and visual cueing system to attack the word - e.g. "mysterious" pronounced as "mistress."
- Errors indicate a visual perception weakness - e.g. reversals such as "drink" read as "brink," transpositions, such as "girl" read as "gril," inversions such as "want" read as "waut."
- Errors in medial vowel sounds - e.g. "glimpse" pronounced as "glumpse", "haunt" pronounced

as "hunt" - may indicate weaknesses in auditory analysis.

- Errors show only parts of the word have been identified. Some children identify only the first consonant, blend or syllable. Others may identify the beginning and end of a word but miss the medial portion. Be aware of where the child is focusing his or her attention in a word.
- Errors show difficulty with auditory conceptualization. These errors show that the child has little awareness of sound correspondence, and the word produced will have very little relation to the stimulus word - e.g. "salary" read as "serious."
- Errors show missing or added prefixes or suffixes - e.g. "assemble" read as "assembly," "evaporate" read as "evaporated."

In general, the teacher should hypothesize as to what strategy the children are attempting to use when they encounter an unknown word in isolation. Word miscues can also be analysed for words in context. Each of the guidelines or examples above applies, although added semantic, pragmatic and syntactic cueing systems are also playing a part.

This word list was read by a child in grade 6. He was at an independent level on the third-grade reading list and then encountered frustration with this fourth-grade reading list. (*Burns/Roe IRI*). What can you hypothesize from the pattern of errors seen in this list?

Stimulus	Response
cartridge	chart.....
disease	dizzy
disturbance	disturbance
foundation	foundacion
gaze	+
harpoon	+
jewel	jello
nervous	+
offend	often
prairie	pr.....
relief	+
remote	+
rumor	rum or
salary	celery
serious	serse
wilderness	winderness

In the previous example, several patterns can be noted. First, it is evident that the child is able to identify the first few letters if not the first syllable of the word he or she is trying to identify. It is also evident that the child is using the visual mode to try to interpret the unknown word. The child identifies the first part of the word, then focuses on one or two key consonants and then fabricates the rest of the word around these key consonants. This pattern is further supported in the errors where the child “reads” the word, but, by the inflection, one can tell that the word is not recognized; e.g. rumor...was read...RUM or, disturbance....was read...DIS tur bance. The reading of the word “salary” as “celery” shows that the student recognizes the shape and key consonants of the word.

One can hypothesize from the errors on this list that the child relies on his visual system to help him unlock unknown words, but he or she has few other efficient strategies to assist him or her.

Running Record

A running record is a way of observing, scoring and analysing a child’s reading behaviour. A running record can assist the teacher in determining what strategies the child is using, to which cueing system(s) the child is attending, whether or not the reading passage is at an

appropriate level for the child, and whether or not the child is monitoring and self-correcting as he or she is reading.

A teacher generally sits next to the child with the reading passage in view. Using a coding system, the teacher records everything the child reads. Generally a check mark is used to indicate a word read correctly. Teachers may use their own marking system or one such as is indicated in Marie Clay’s book *An Observation Survey of Literacy Achievement*.

Running records give an indication of word accuracy in the form of a percentage, found by dividing the number of correct words by the total number of words and multiplying by 100%.

$$\frac{\text{Number of words correct}}{\text{Total number of words}} \times 100\% =$$

A percentage of approximately 90-95% would be considered an instructional level.

Analysis of the running record involves examining each error or self-correction and determining the cause of the error or self-correction. In each case the teacher considers whether or not the child is using any of the four cueing systems, i.e. graphophonic, syntactic, pragmatic, or semantic, as he or she is reading. The teacher also considers whether or not the child is making predictions. (Adapted from Teacher’s Manual for *Early Success Program* by Houghton Mifflin)

Miscue Analysis

Miscue analysis is a means by which an examiner, usually a teacher, marks and then diagnostically analyses the oral reading of a child on the basis of the pattern of errors. Miscue analysis allows the teacher to hypothesize the strategies that a child uses when he or she is reading words in context. A word-accuracy score can also be obtained in this manner. The following is a suggested marking system, although teachers may develop their own:

Marking:

• mispronunciation	wert went	The student attempts to pronounce the word but produces a nonsensical word that has no meaning.
• substitution	want went	A real word is substituted incorrectly.
• insertion	sent ^{on} \ to	The student inserts a word or a series of words that does not appear in the text.
• omission	to\school	A word or words are omitted from the text.
• repetition	in <u>the</u> house	A word or words are repeated.
• reversal	that <u>he</u> saw	The word order is reversed or transposed.
• lengthy pause	//	The student stops for a second or more.
• successful correction	C in my house <u>in the roof</u>	The student successfully corrects a miscue.
• unsuccessful correction	U in my house <u>on the roof</u>	The student attempts a correction but is unsuccessful in producing the word.
• meaningful substitution	T	The miscue makes sense within the context of the sentence or story.
• prediction	P	The miscue indicates that the child is predicting as he or she is reading.
• nonsense word	N	The miscue does not make sense whether as a prediction or as a meaningful miscue. Usually these are nonsense words.

(Adapted from manual for Burns/Roe Informal Reading Inventory)

In order to interpret properly the miscue analysis, teachers must rely on their knowledge of the reading process to determine what strategies the child is attempting to use as he or she is reading. Initially teachers should look for the use of the semantic cueing system. In other words, teachers should try to determine whether or not the child is attempting to construct meaning as he or she is reading. The use of the semantic system will be evident in the child's use of meaningful substitution and prediction, particularly when the prediction is self-corrected.

The use of the syntactic system is evident in substitutions that are meaningful within a sentence, but not necessarily within the context of the story. The child bases his or her predictions on the word order or sentence pattern (syntax). Self-corrections will also be evident in miscues that are not grammatically correct.

The use of the pragmatic system is evident in miscues where it is evident that the child has or has not attended to conventions of print, such as different forms of genres, or conventions such as capital and lower-case letters or punctuation.

The use of the graphophonemic system will be evident in miscues that are visually similar or sound similar to the original word, but may not necessarily make sense.

It is the teacher's job to determine on which of these systems the child is relying most heavily. The teacher should attempt to determine if the child is using good reading strategies, or if he or she is a word-by-word reader who is not attending to the context of the story.

Reading Starts with Understanding Phonemes

Reading starts with phonemic awareness – the ability to notice, think about and manipulate the individual sounds in words or phonemes. Phonemes are the smallest units of sound in our language that can make a difference in the meaning of a word (like *cat* vs. *rat*). From just forty-four of these speech sounds, we create all the words of the English language.

Phonemic awareness is an auditory skill. A child may have satisfactory hearing but still not be able to recognize phonemes in context. Phonemes are much harder to interpret in noisy situations, when they blend with other sounds, or when they occur in a series of rapid successive speech sounds.

Phonemic awareness is part of a broader skill set called phonological awareness, which is the ability to recognize and use all sizes of sound units, such as words, syllables and phonemes. Phonological processing, and particularly phonemic awareness, is the primary area where children with reading difficulties may differ from other children.

A child is said to have a phonological-processing problem when he or she has difficulty perceiving, decoding, remembering and retrieving verbal information. These auditory skills are necessary for children learning any language, even a language as different from English as Chinese.

Children who grasp quickly the relationships between letters and word sounds almost always become better readers than children who struggle with these relationships do. Phonological awareness is not all that a child needs to learn to read, but it is a necessary and an integral part of the process for most children.

Research has shown that children with a weak awareness of sound/letter relationships and phonology are, on average, below their peers in reading ability. That is, those in the bottom twenty percent of phonological awareness at the beginning of the first grade are about two and a half grade levels or more below their peers in reading by the end of the fifth grade. (Adapted from *Fast ForWord – Building a Foundation for Reading*)

Phonemic awareness is not phonics. Phonemic awareness is an understanding about spoken language. Children who are phonemically aware can tell the teacher that *bat* is the word the teacher is representing by saying three separate sounds in the word. They can tell the teacher all of the sounds in the spoken word *dog*. They can tell the teacher that, if the last sound were taken off the word *cart*, the word would be *car*. Phonics, on the other hand, is knowing the relation between specific printed letters (including combinations of letters) and specific spoken sounds. The teacher is asking children to show their phonics knowledge when asking them which letter makes the first sound in *bat* or *dog*, or when asking them the last sound in *car* or *cart*. The phonemic awareness tasks that have predicted successful reading are tasks that demand that children attend to spoken language, not tasks that simply ask students to name letters or tasks that ask them to tell which letters make which sounds. In fact, if phonemic awareness just meant knowledge of letter/sound relations, there would have been no need to coin a new term for it. (From *International Reading Association. Reading Online*)

The level of phonemic awareness that a child exhibits on entering school when he or she is faced with an alphabetic script is widely held to

be the strongest single determinant of the success that he or she will experience in learning to read – or conversely, the likelihood that he or she will fail.

Among readers of alphabetic languages, those who are successful invariably have phonemic awareness, whereas those who lack phonemic awareness are invariably struggling. Research clearly shows that phonemic awareness can be developed through instruction and, furthermore, that such instruction significantly accelerates children's subsequent reading and writing achievement.

Informal Tests of Information Processing

One of the key factors in identifying the needs of a child with Specific Learning Disability is the identification of areas of weakness and strength, which relate to the ways in which the child processes visual, auditory or kinesthetic information. Informal tests such as the *Slingerland Screening Tests for Identifying Children with Specific Language Disability* can provide essential information for understanding the learning needs of the child with Specific Learning Disability. Tests such as the *Slingerland* provide information on visual perception, visual memory, visual motor processing, auditory memory, and auditory perception. Such tests, since they are informal, can be developed at a district or school level, although various published materials are available.

Once processing needs are determined, strategies to assist children in using their processing strengths and coping with their processing weaknesses can be developed. Tests such as the *Slingerland* are informal and therefore are not standardized using a normative process. However, general guidelines have been established for their use.

Standardized Tests of Educational Achievement

Another form of assessment tool that is critical to the process of identifying and planning for the needs of children with specific learning disability is the standardized test of educational achievement. There are many examples of this type of test, but the ones that give the most information relative to children with Specific Learning Disability are tests that assess reading decoding, reading comprehension, math computation, math applications, and/or written language, and have the capability of providing information related to error analysis. Some examples of this type of test include, but are not limited to, *Kaufman Test of Educational Achievement*, *Woodcock Reading Mastery Test – Revised*, *Keymath Diagnostic Arithmetic Test – Revised*.

Standardized tests of educational achievement have been taken through a normative process and show evidence of validity and reliability. Formal assessment procedures employ tightly organized test materials, structured test situations, and group-based comparisons. These tests often have a highly prescribed test format and are designed to reveal data that can be compared to that obtained on children who were tested during the instrument's construction. (Guerin and Maier 1983)

In most cases, those qualified to administer this type of test include, but are not limited to, school psychologists, learning disabilities specialists, educational diagnosticians, reading specialists, clinical psychologists, remedial reading teachers, resource and methods teachers, counsellors, social workers, and others within the general fields of psychology, education, and social service who have background training in assessment. (KTEA Manual 1985).

Other tests, such as the *Wechsler Individual Achievement Test* (WIAT), are slightly more restrictive in the qualifications of those permitted to administer them. Usually, individuals in educational or psychological

testing who have *graduate level training* in the use of individually administered assessment instruments are qualified to administer these tests. (WIAT Manual 1990) Many resource and methods teachers would fall into this category.

In each case it is best to consult the test manual for reference to examiner qualifications.

Standardized tests of educational achievement provide further information related to the children's level of skill development in certain academic areas as compared to a normative group of children, whether in the same grade or age group. Children with learning disabilities generally show significant lags in one or more academic areas.

Standardized Tests of Information Processing

Similar to informal tests of information processing, standardized tests of information processing, such as the *Detroit Tests of Learning Aptitude: 4*, also provide information related to visual memory, visual perception, visual-motor processing, auditory memory, auditory perception and kinesthetic processing. Tests such as the *Peabody Picture Vocabulary Test – III* and the *Expressive Vocabulary Test* provide information on general vocabulary usage. More in-depth language tests such as the *Test of Language Development (Intermediate or Primary): 3* provide information related to language processing and pragmatics. There are many of these types of tests available, but again the examiner qualifications are restricted.

Standardized Tests of Intellectual Functioning

In order to confirm whether or not children are diagnosed with Specific Learning Disability, a standardized measure to determine intellectual potential, such as the *Wechsler Intelligence Scale for Children-III*, should be completed. The results from this testing will help determine if a discrepancy between intellectual potential and academic achievement is present. Furthermore,

analysis of the various subtests can help to clarify strengths and weaknesses in information processing. Examiner qualifications for this type of test are the most restricted. Teachers may find the book *How to Detect Reading/Learning Disabilities Using the WISC-III* by Evelyn Searls (1997) helpful in demystifying WISC-III results.

Administration of a test of intellectual functioning should be the last step in the assessment process for children with Specific Learning Disability. Having progressed from informal assessment to formal assessment, and having had psychologists, district personnel, resource teachers, classroom teachers and parents involved in a collaborative planning process, the children should already have an educational program designed to address their needs.

For those children whose information processing is hindered by weaknesses related to focus of attention, further investigation with the assistance of a psychologist, using behaviour related tests such as the *Conners' Rating Scales-Revised*, may be warranted.

Observations Report Form General

Student's Name:

Date:

Oral Language:

Handwriting or Printing:

Copying Ability:

Focus of Attention:

Written Expression:

(Continued on reverse)

Problem-Solving Skills:

Social Skills/Peer Relationships:

General Classroom Behaviour

Observations Report Form General

Student's Name:

Date:

Oral Language:

Handwriting or Printing:

Copying Ability:

Focus of Attention:

Written Expression:

(Continued on reverse)

Problem-Solving Skills:

Social Skills/Peer Relationships:

General Classroom Behaviour

Work Sample Report Form

Student's Name: _____

Date: _____

Written Language

Expressing/sequencing thoughts:

Sentence/paragraph structure:

Word order/verb agreement

Expressive vocabulary:

Length of paragraphs/sentences:

(Continued on reverse)

Words omitted/added/substituted:

Language mechanics/pragmatics

Spelling

Phoneme/grapheme association

Regular/irregular patterns:

Letters or sound units omitted/substituted/added/rearranged:

(Continued)

Work Sample Report Form

Prefixes/suffixes/word endings:

Sound analysis

Spelling lists:

Spelling in daily work:

Expressive Language

Oral vocabulary:

Word finding:

(Continued)

Fluency in conversation:

Sentence structure/syntax:

Words omitted:

General articulation:

Comprehension of questions:

(Continued)

Work Sample Report Form

Math

Math facts:

Sequencing steps in computation:

Organizing numbers (lining up):

Place value:

Money:

Time:

(Continued)

Measurement:

Estimation:

Attention to operational signs:

Choosing the correct operation:

Solving multi-step word problems (look for omission of steps or steps out of order):

(Continued)

Work Sample Report Form

Visual-Motor Integration

Gross/fine motor abilities:

Handwriting/printing:

Letter formation/size/spacing:

Length of time to copy or complete:

Accuracy of copying:

Organization of work on paper:

(Continued)

Ease of transition from manuscript to cursive:

General Language Usage

Following directions (understanding the language of the direction):

Receptive language:

Social relations related to language weakness:

Work Sample Report Form

Student's Name:

Date:

Written Language

Expressing/sequencing thoughts:

Sentence/paragraph structure:

Word order/verb agreement

Expressive vocabulary:

Length of paragraphs/sentences:

(Continued on reverse)

Words omitted/added/substituted:

Language mechanics/pragmatics

Spelling

Phoneme/grapheme association

Regular/irregular patterns:

Letters or sound units omitted/substituted/added/rearranged:

(Continued)

Work Sample Report Form

Prefixes/suffixes/word endings:

Sound analysis

Spelling lists:

Spelling in daily work:

Expressive Language

Oral vocabulary:

Word finding:

(Continued)

Fluency in conversation:

Sentence structure/syntax:

Words omitted:

General articulation:

Comprehension of questions:

(Continued)

Work Sample Report Form

Math

Math facts:

Sequencing steps in computation:

Organizing numbers (lining up):

Place value:

Money:

Time:

(Continued)

Measurement:

Estimation:

Attention to operational signs:

Choosing the correct operation:

Solving multi-step word problems (look for omission of steps or steps out of order):

(Continued)

Work Sample Report Form

Visual-Motor Integration

Gross/fine motor abilities:

Handwriting/printing:

Letter formation/size/spacing:

Length of time to copy or complete:

Accuracy of copying:

Organization of work on paper:

(Continued)

Ease of transition from manuscript to cursive:

General Language Usage

Following directions (understanding the language of the direction):

Receptive language:

Social relations related to language weakness:

Giving the TAAS (Test of Auditory Analysis Skills)

The test starts off with two demonstration items that are intended to show the child what he or she is expected to do. The first (item A) goes like this: “ Say **cowboy**.” (Now pause and allow him or her to respond. This lets you know that he or she heard the word.) Then say “Now say it again, but don’t say **boy**.” Give him or her time to respond. (The correct answer, of course, is **cow**.)

If he or she gets this one correct, move on to the second demonstration item. If he or she does not get item A correct, attempt to explain the task to the child. If it requires more than a simple explanation, stop testing.

The second demonstration item (item B) is “Say **steamboat**.” (Pause – wait for the response.) “Now say it again, but don’t say **steam**.”

If the child answers both demonstration items correctly, start the test with item 1. If the child does not answer both demonstration items correctly, do not administer any more items. Stop testing when the child has answered two in a row incorrectly.

Item	Question	Correct Response
A.	Say cowboy Now say it again, but don’t say boy	cow (Preschool)
B.	Say steamboat Now say it again, but don’t say steam	boat (Preschool)
1.	Say sunshine Now say it again, but don’t say shine	sun (Kindergarten)
2.	Say picnic Now say it again, but don’t say pic	nic (Kindergarten)
3.	Say cucumber Now say it again, but don’t say cu(q)	cumber (Kindergarten)
4.	Say coat Now say it again, but don’t say /k/ (the k sound)	oat (Grade 1)
5.	Say meat Now say it again, but don’t say /m/ (the m sound)	eat (Grade 1)
6.	Say take Now say it again, but don’t say /t/ (the t sound)	ache (Grade 1)
7.	Say game Now say it again, but don’t say /m/	gay (Grade 1)
8.	Say wrote Now say it again, but don’t say /t/	row (Grade 1)
9.	Say please Now say it again, but don’t say /z/	plea (Grade 1)
10.	Say clap Now say it again, but don’t say /k/	lap (Grade 2)
11.	Say play Now say it again, but don’t say /p/	lay (Grade 2)
12.	Say stale Now say it again, but don’t say /t/	sale (Grade 3)
13.	Say smack Now say it again, but don’t say /m/	sack (Grade 3)

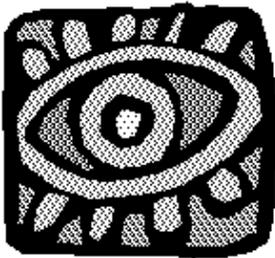
(Rosner 1979)

Checklist for General Warning Signs

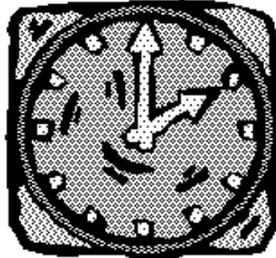
Use the following checklist to help you to identify areas of weakness regarding your students.

Check each of the warning signs that apply to the student being considered. Each of these statements is followed by a set of capital letters that will help you to further identify specific areas of processing weakness. The capital letters represent the following:

V: Visual



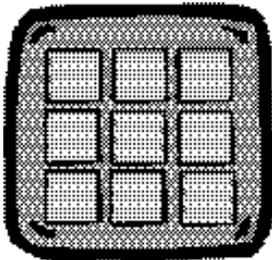
VS: Visual Spatial



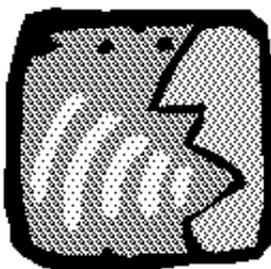
A: Auditory



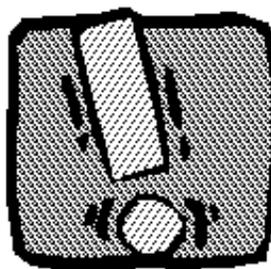
O: Organization



L: Language



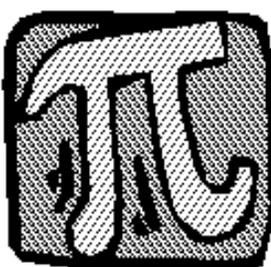
At: Attention



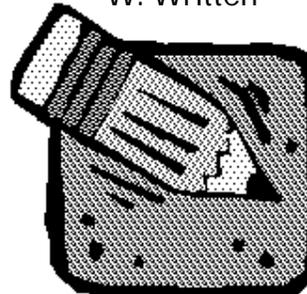
M: Memory



Ma: Math



W: Written



For each statement that you have checked, put a checkmark or X under the corresponding deficit columns indicated in the chart on the last page of this section.

Once you have identified a potential area(s) of weakness, go to the more specific checklist and strategies for the indicated area(s).

Checklist for General Warning Signs

- Does the student seem disorganized in his or her thinking? (O, A)
- Are there reversals, inversions, or transpositions in reading and writing beyond what you would usually see at your grade level? (V,VS,W)
- Is the student slow to respond when you give a direction or ask for an oral response? (A,L)
- Is the student confused or slow to respond when asked to complete written work? (A,L,W)
- Is written work often not completed within a time limit? (W,O)
- Does the student consistently have difficulty with personal organization? (O)
- Is oral language often rambling or disjointed? (A,L)
- Is expressive language in written form often rambling or disjointed? (At,L,O)
- Does the student have difficulty organizing and/or sequencing his or her thoughts when given a general topic or task? (At,O,W)
- Does the student have difficulty remembering what was just said or seen? (A,V, At, M)
- Does the student have difficulty remembering stored facts or coming up with the appropriate word without prompting? (L,M)
- Is the student restless during videos or visual presentations? (V)
- Does the student use both left and right hands in motor activities? (VS)
- Does the student tune out in noisy environments (may be viewed as a daydreamer)? (A)
- Does the student have difficulty recognizing a pattern or sequencing thoughts or pictures? (VS)
- Is the student an adequate oral speller, but a poor written speller? (V)
- Does the student appear to listen, but process the information heard inaccurately or out of sequence? (A)
- Does the student have difficulty learning sounds and sound patterns (phonemic awareness, phonics, linguistic method)? (A)
- Does the student have difficulty making decisions? (At, O)
- Does the student act impulsively...speak before thinking...act before thinking...answer before considering possibilities? (At)
- Does the student have difficulty making and keeping friends? (At,L)
- Does the student find social situations difficult? (L)
- Does the student misperceive social situations? (At, L)
- Does the student have difficulty discriminating size, shape or colour? (V,VS)
- Does the student have a poor sense of time? (VS)
- Does the student have difficulty with time concepts such as days, weeks, months, years? (VS,O)
- Is the student clumsy and does he or she show poor visual-motor co-ordination? (VS)
- Is the student totally dysfluent on paper (known as agraphia)? (W)
- Does the student lose the gist or thought easily when writing? (W)
- Does the student have difficulty copying notes from the board? (V,M)
- Does the student omit capitalization and/or punctuation consistently? (W)
- Does the student have difficulty with abstract reasoning or with problem solving? (O)

- Does the student have difficulty with the concepts of time, money, measurement, directionality and/or sequencing in math? (Ma)
- Does the student have difficulty with abstract or symbolic math concepts? (Ma)
- Does the student have difficulty choosing the correct operation in math? (Ma)
- Does the student have difficulty filtering out non-essential information - i.e. can he or she direct his or her attention to the task at hand? (At)
- Does the student have difficulty focusing and maintaining attention? (At)
- Does the student have difficulty with basic calculation? (V,M,Ma)
- Does the student have difficulty with math applications? (V,M,Ma)
- Does the student have difficulty with abstract patterns and relationships between numbers? (VS,Ma)
- Does the student have difficulty understanding numerical order or place value? (Ma)
- Does the student express himself or herself much better orally than in written form? (W)
- Does the student remember information for a day or two, but forget over the long term? (M)
- Does the student consistently forget how to print his or her name, or forget his or her street address, simple number facts, names of letters, etc.? (M)
- Does the student have difficulty with word recall? (M)
- Does the student have difficulty with math facts, formulas or the sequence in a formula? (Ma)

These characteristics should be evident at a level beyond that which you would usually see at your grade level.

Deficit Chart

Locate the identification letters next to the boxes you checked in the previous checklist. Put a check mark for every letter under the corresponding columns on this chart. The columns with the most check marks are areas that need further investigation.

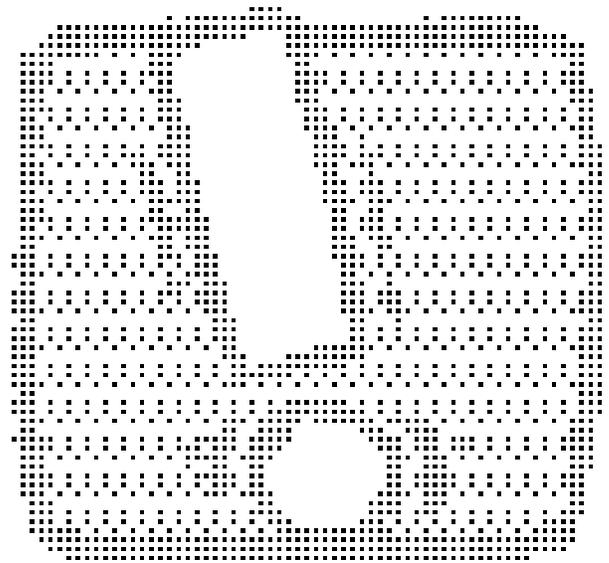
A	At	L	V	VS	W	M	O	Ma

Characteristics of Specific Deficit Areas with Teaching Strategies and Methods of Evaluation

The next section of the resource book is divided into specific deficit areas. Each area contains a more specific checklist and a section on teaching strategies and methods of evaluation.

The checklists will help to further determine whether or not the student is displaying weaknesses related to a specific processing area.

Consider the characteristics listed in the area that has been identified from the General Checklist as a potential area of weakness, and place a check mark beside the ones that apply to the student. If a majority of the characteristics listed for a specific deficit area are evident in the student, then go to the section(s) related to the teaching strategies and evaluation methods included in that section.

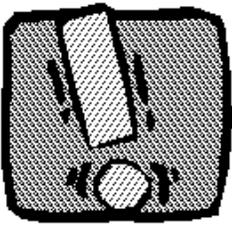


Attention Deficit

*An **attention deficit** is the inability to filter out extraneous auditory, visual or kinesthetic information in order to focus and maintain attention to the task at hand. Hyperactivity or impulsiveness may be evident with this deficit.*

The following is a list of characteristics that may be evident in children with this deficit. Use this as a checklist with regard to students' who you think may fit this category.

- The student is fidgety.
- The student is slow to respond when asked to give a direction, when asked for an oral response, or when asked to complete written work.
- The student often misperceives social situations.
- The student leaves his seat at inappropriate times.
- The student runs or climbs or is generally overactive in inappropriate situations.
- The student talks excessively.
- The student has difficulty playing or working quietly.
- The student is always on the go.
- The student tends to blurt out answers.
- The student has trouble waiting for his/her turn.
- The student interrupts often.
- The student has difficulty following through on instructions.
- The student has difficulty maintaining attention on the task at hand.
- The student loses things necessary for tasks and activities at school or at home.
- The student has difficulty listening.
- The student fails to give close attention to detail.
- The student seems disorganized.
- The student has trouble with tasks that require sustained focus.
- The student is forgetful.
- The student is easily distracted.



Methods/Strategies:

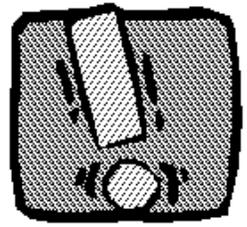
- Put the child in a more structured seating plan with his or her back to classmates, away from high traffic areas.
- Inform the child when possible, prior to all scheduled changes in routine.
- Give only one direction at a time.
- Check with the child to see if directions have been understood.
- Activity-based lessons with lots of movement work much better for this type of child. Try to program scheduled breaks into the day. Asking these children to sit still for any length of time is an unreasonable request and most likely not possible for them.
- A calm, positive manner is much more productive with this type of child.
- Plan organization strategies into this child's lesson (see section on organization).
- Reduce the amount of homework given, but not the level of difficulty of the task.
- Send home an extra set of textbooks to circumvent memory lapses with regard to bringing books home or to school.
- Be patient, as these children become more frustrated and tire more easily than others.
- Make eye contact with the child when giving instructions.
- Establish daily contact, if possible, with the parents, e.g. notes in a homework book, Talk Mail, or brief daily reports to be signed by the parents.
- Use classroom tokens for reward when appropriate.
- Use encouraging statements to elicit appropriate behaviours.
- Praise appropriate behaviour and ignore inappropriate behaviour.
- Immediately give a reprimand if one is necessary.
- Use time out when necessary.
- Provide a quiet space to work without distraction when appropriate and if possible.

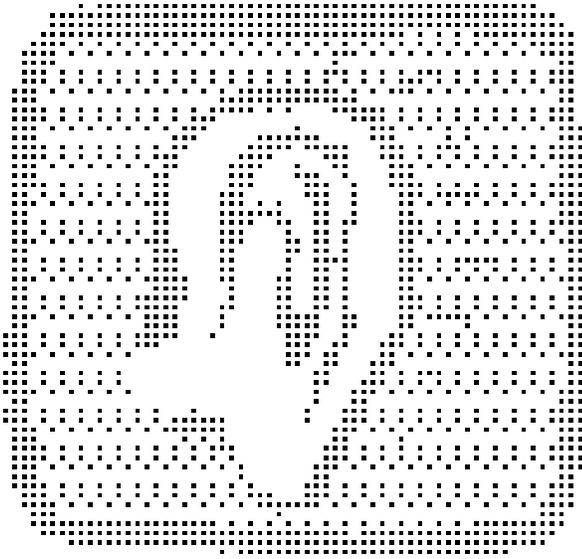
- Help to build self-esteem by displaying work or projects that emphasize the child's strengths.
- Use a signal to draw the child's attention back.
- Redirect physical energy, or ignore it.
- Assign a classroom or study "buddy" to the child.
- Provide visual examples and steps for completing assignments.
- Provide an outline and ensure that the child understands the exact requirements for his or her assignments.
- Provide the child with a copy of the reading material with the main ideas highlighted.
- Allow the child to have practice tests prior to testing so he or she comprehends the structure of testing.
- Try using calming music when working on a task, testing, or during transition times.
- Provide an outline for lengthy reading assignments.
- Provide earphones and tapes of a text, book, or passage.

Evaluation

- Adjust the length of tests, not the level of difficulty. Measure knowledge, not endurance.
- Allow extra time for completion of tests.
- Avoid visually crowded sheets or confusing configurations on tests.
- Arrange for a quiet area for the child to work during testing.
- Allow for scheduled breaks during testing.
- Base evaluations on a demonstration of knowledge of curriculum concepts and content, not simply on completion of all grade assignments. This child may not be able to complete the same number of assignments, but may display adequate knowledge.
- Consider open-book tests.
- Give oral tests or make a scribe available when necessary.
- Consider providing the test on tape, to which the student responds on an answer sheet.

- Assign oral reports or hands-on projects.
- Give more weight for assignments or projects that allow the child to show his or her understanding, using his or her strength area(s).





Auditory-Processing Deficit

An **auditory-processing deficit** is the inability to interpret, organize, analyze, or synthesize an auditory message in the absence of a hearing impairment. Many children who have been diagnosed with **Central Auditory-Processing Disorder (CAPD)** would fall under this category.

The following is a list of characteristics that may be evident in children with this deficit. Use this as a checklist with regard to students who you think may fit this category.

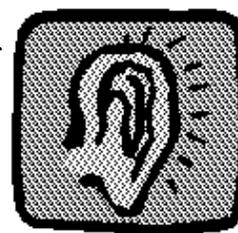
- The student tunes out in a noisy environment (may be viewed as a daydreamer).
- The student listens but processes the information heard inaccurately and often out of proper sequence.
- The student is unable to follow oral directions, especially those given quickly.
- The student frequently asks for information to be repeated (often uses question words such as huh? what?).
- The student has difficulty retaining material presented orally.
- The student has difficulty learning sounds and sound patterns (phonemic awareness, phonics, linguistic method).
- The student is unable to retain sounds or words long enough in order to make meaning from them.
- The student has a delay in language development, vocabulary, or articulation.
- The student is unable to discriminate between similar sounding words (e.g. shut and shot).
- The student often looks to see what everybody else is doing before carrying out directions.
- The student prefers visual or active games to those involving listening or speaking.
- The student may not respond as rapidly to sounds as others.
- The student is unable to explain in verbal or written fashion what he or she can achieve by doing.
- The student's written or oral responses will appear very simple and will not be an accurate indication of his or her knowledge.
- The student's responses and comments may often appear to be dissociated from the topic.

- ❑ The student experiences difficulty with dictated notes.
- ❑ The student experiences difficulty with short and fast quizzes.
- ❑ The student experiences difficulty making notes from what the teacher has said.
- ❑ The student has difficulty sorting out background noises.
- ❑ The student has difficulty focusing on one sound among many.
- ❑ The student has difficulty answering oral questions and repeating sentences.

Methods/Strategies:

- Place the student near the front of the room or near the teacher, away from the door or window that may provide a source of auditory distraction.
- Offer the student a study carrel to work in if one is available.
- Place the student in a structured rather than an open classroom if possible.
- Have most oral lessons in written form or in outline form for this student.
- Place less emphasis on decoding words. Encourage the use of context and picture cues.
- Use taped books, as this will assist the child to associate the auditory with a visual message.
- Intervene with phonemic awareness activities or programs.
- Make sure the student has eye contact with the teacher when instructions are given, and ensure that the student is attending to what is being said.
- Teach the student the mouth position associated with certain sounds, when teaching these skills in the classroom.
- Speak in a slow and distinct manner, using simple vocabulary.
- Use gesture to reinforce what is being said.
- Emphasize key words and word endings when speaking or writing, especially when presenting new information.

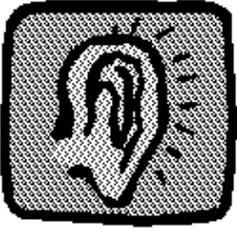
- Paraphrase instructions and information in simpler language rather than only repeating.



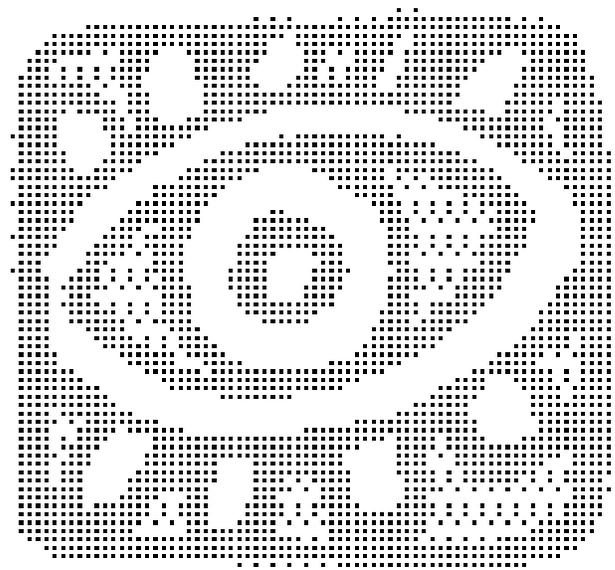
- Encourage the student to ask questions when confused.
- Make instructional transitions clear.
- Avoid asking the student to listen and write notes at the same time.
- Provide copied notes when necessary.
- Show patience with these children as they tire easily.
- Monitor the student's understanding of directions by asking the student to repeat the direction given.
- Pair the student with a peer helper who can assist the student when he or she has not grasped the auditory message.
- Do not count spelling in daily work or test situations.

Evaluation Strategies:

- Break the test into smaller portions.
- Provide a scribe for testing.
- Do not count spelling on a test.
- Ensure that the student has understood the directions for a test.
- Give the student short directions, explanations, and instructions to follow.
- Provide written directions and instructions to supplement verbal directions and instructions.
- Identify a list of word endings, key words, etc. that the student will practise listening for when someone is speaking.
- Have the student silently repeat or sub-vocalize information just heard.
- Deliver directions to the child individually.
- Interact frequently with the student during testing.
- Give the student one task to perform at one time.
- Provide visual aids whenever possible.



- Provide a quiet place to write a test.
- Provide extra time when necessary (usually time and a half is sufficient)
- Allow point-form answers to essay questions.

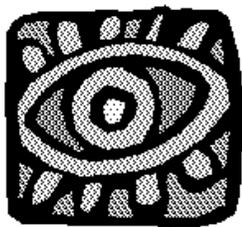


Visual-Processing Deficit

A **visual-processing deficit** is the inability to interpret, organize, analyse or synthesize a visual message in the absence of a visual impairment.

The following is a list of characteristics that may be evident in children with this deficit. Use this as a checklist with regard to students who you think may fit this category.

- The student is inattentive to visual tasks and can be easily distracted by too much visual stimuli (e.g. brightly coloured posters, or too much clutter in the classroom).
- The student is restless during videos or visual presentations.
- The student has difficulty copying from the board, test paper, calculator or textbook to the student's own paper.
- The student's written copy may show missing figures or words, reversals, inversions, additions, deletions, or transpositions in letters or numbers.
- The student does not remember what he or she has read silently
- The student rubs his or her eyes or complains that his or her eyes are bothering him or her. The eyes may be bothered because of the intensity needed to decipher the visual material.
- The student's reading level is below average.
- The student's oral reading comprehension is better than his or her silent reading comprehension.
- In math, the student is inattentive to function signs, omits steps in a formula, or confuses visually similar formulas.
- The student is a poor written speller, but is an adequate oral speller.
- The student does not observe visual changes or stimuli that other children notice (e.g. bulletin board displays, posted notices in obvious places).
- The student's directionality is weak, and the student gets lost in unknown places, often copies numbers reversed, inverted or transposed from the original.
- The student's reading level is below average.
- The student's work shows persistent spelling errors.

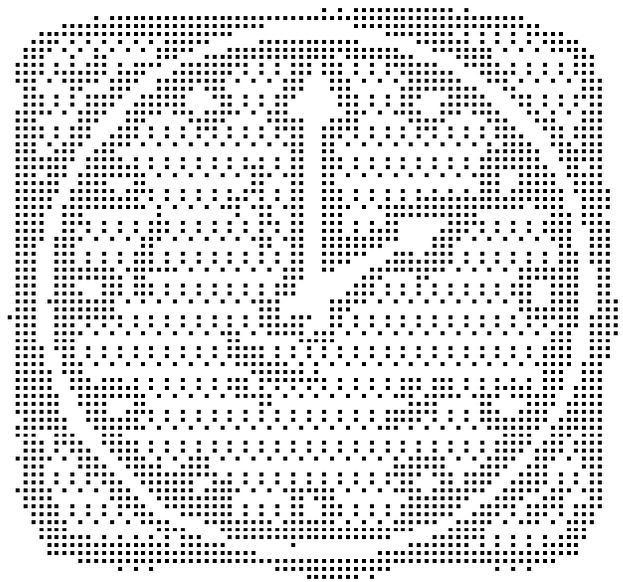


Methods/Strategies:

- Reduce the amount of visual information on a page.
- Have the student use graph paper to assist him or her in lining up the numbers properly.
- Highlight or underline important phrases in the student's assigned reading.
- Assign fewer questions, but retain the level of difficulty given to an assignment.
- Have the student consistently use a word processor for written work.
- Reduce distracting visual stimuli in the classroom.
- Allow for extra time for written tasks.
- Provide copied notes.
- Allow the use of a calculator for math-related activities.
- Have the student use a sliding mask, finger, or ruler when reading.
- Use a scribe when necessary to record answers.
- Be aware of the difficulty associated with visual tasks such as matching.

Evaluation Strategies:

- Provide oral testing.
- Provide a scribe for testing.
- Give extra time.
- Be aware of the visual difficulty of particular test questions.
- Provide a model or example if possible.



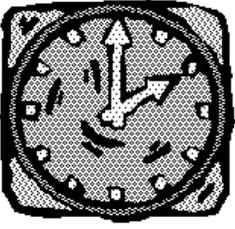
Visual-Spatial Deficit

A **visual spatial deficit** is the inability to interpret, organize, analyse or synthesize the spatial components of a visual message in the absence of a visual impairment.

- The student has poor handwriting or artwork.
 - The student loses his or her place when reading and skips important details or figures on a page.
 - The student's reading level is below average.
 - The student's mapping or graphing abilities are weak.
 - The student consistently uses a finger to keep his or her place when reading or finding a word in a composition (poor tracking).
 - The student has poor skills when attempting to accurately match letters and figures in correct spaces (e.g. letter and number matching activities in columns).
 - The student has difficulty locating specific words in dictionaries or texts.
 - The student's papers are poorly organized, and information is scattered.
- The student has difficulty with depth perception and measurement.
 - The student is clumsy.
 - The student's written work appears sloppy.
 - The student has difficulty perceiving spaces between words and recognizing punctuation in written language.
 - The student often pushes the wrong numbers on a calculator or phone.
 - The student has difficulty with time concepts or with the passage of time.

Methods/Strategies:

- Have the student use outline format or visual organizers.
- Encourage the use of a word processor.
- Have the student use coloured overlays when reading.
- Encourage cursive writing rather than manuscript to reduce reversals, inversions, etc.
- Provide strategies for organization.
- Have the student consistently use an agenda or calendar to assist in preplanning. A peer helper, volunteer or parent may assist with this task.

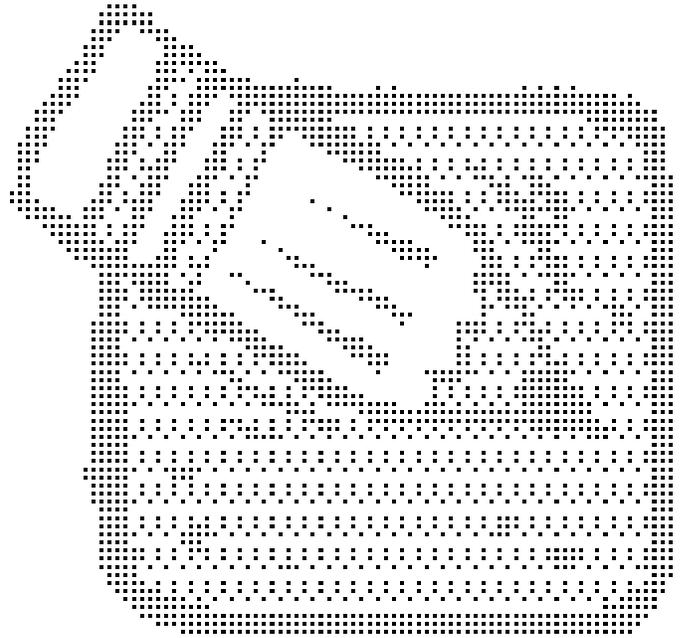


- Use concrete, hands-on examples whenever possible when introducing a new concept.
- Have the student use graph paper to assist in lining up numbers on a page.

- Reduce the amount of visual information the student has to absorb at one time.
- Reduce the number of assigned questions, but retain the level of difficulty.
- Use clay or other kinesthetic means when introducing letters in the early years.

Evaluation Strategies:

- Provide oral testing or a scribe.
- Allow blank visual organizers to be brought to a testing situation, and evaluate these organizers if not enough time is available to the student to translate the organizer to written form.
- Accept point-form answers.
- Allow calculator for math activities.
- Limit the amount of visual information presented on a test page.
- Consider alternative methods, other than a written test, of checking for understanding of a concept.
- Allow extra time.



Written-Expression Deficit

A **written-expression deficit** is the inability to effectively communicate thoughts and ideas in a structured, sequential, and organized form.

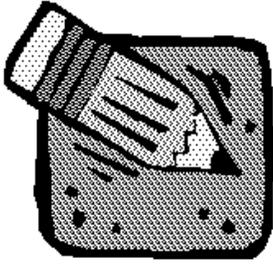
The following is a list of characteristics that may be evident in children with this deficit. Use this as a checklist with regard to students who you think may fit this category.

- The student has poor or dysfunctional handwriting, otherwise known as dysgraphia.
- The student has total dysfluency on paper, known as agraphia.
- The student has poor spelling.
- The student has difficulty copying from the board or from dictation.
- The student has poor visual-spatial perception (may start in odd places on the page, use erratic spacing, use different sizes for letters).
- The student prefers to print while others are writing, or the student uses both printing and cursive writing in the same assignment.
- The student is much slower than others to complete written work.

- The student loses the gist or thought easily when writing.
- The student omits capitalization and/or punctuation consistently
- The student can express himself or herself much better orally.

Methods/Strategies:

- Consider alternative forms, other than written tasks, of practising and demonstrating knowledge in a concept area.
- Encourage the use of a word processor.
- Pair the student with a classroom buddy who can do the writing for the child.
- Utilize co-operative learning groups.
- Model written work for the student to allow him or her to imitate your sentence structures.
- Allow the student to read his or her written work aloud to help identify errors in organization.
- Help the student “brainstorm” ideas about a topic and then show him or her how to put these ideas into an outline form, combining some ideas and discarding others.
- Reduce distracting stimuli by placing the student in a study carrel or “office” when engaged in writing activities.



- Have a peer act as a model for spelling words phonetically. Have the student read the material that the peers write phonetically.

- Allow the student

to keep a dictionary of “most often misspelled words.”

- Provide practice in spelling by using a computer software program that gives the student immediate feedback.
- Try various activities to help strengthen and reinforce the visual memory of spelling words (i.e. flashcards, word lists on the chalkboard, a list on the student’s desk, etc.).
- Have the student maintain a folder of all spelling words.
- Place a grip on the pencil to enable the student to hold it more effectively.
- Allow the student to use wide-lined paper (for students at the beginning stages of learning printing and cursive writing).
- Use computer paper to help the student write letters at the correct height.
- Use paper with raised lines to help a student whose letters tend to go above or below the line.
- Allow the student to demonstrate knowledge in non-written form (i.e. oral report, art project, play, etc.).
- Have the student practise air writing (of critical importance for dyslexic and dysgraphic students). This connects kinesthetic with visual mode.
- Have a poster with a list of the qualities of good writing posted in the classroom.
- Provide specific organizational strategies for writing, e.g. story maps/webs, visual organizers, flow charts, outlines.
- Allow the student extra time for copying or for producing written assignments.
- Have copied notes available for the student.
- Encourage the student to use a tape recorder to record draft copies of written work.

Evaluation Strategies:

- Permit the use of point form or visual organizers for answers to essay questions or questions of a similar type.
- Provide oral testing or a scribe when possible.
- Follow up a written test with oral questioning on missing parts.
- Provide a word processor for tests.
- Consider a take-home test.
- Use fill-in-the-blank, true-or-false or matching questions to reduce writing requirements.
- Allow the student to answer questions, using a tape recorder.
- Have the student with visual perception difficulties use a ruler to place under the question to guide him or her to the correct response box.

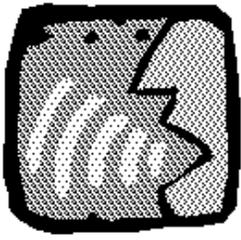


Language-Processing Deficit

*A **language-processing deficit** is the inability to receive, comprehend, organize, and express language in its appropriate forms in the absence of sensory impairments.*

The following is a list of characteristics that may be evident in students with this deficit. Use this as a checklist with regard to students who you think may fit into this category.

- The student's spoken language shows limited vocabulary, incomplete sentences, improper grammar, and confused or poorly sequenced thoughts.
- The student has word retrieval difficulties.
- The student has difficulty understanding the meaning of some phrases.
- The student does not express feelings or thoughts logically.
- The student says one thing, but writes something else.
- The student substitutes words of similar meaning.
- Peers and others often have difficulty understanding the student.
- The student has difficulty determining the main idea or theme.
- The student has difficulty identifying a sequence in a story.
- When given a general theme, the student has difficulty generating or identifying supporting details.
- The student has difficulty linking and categorizing verbal concepts.
- The student has poor spelling.
- The student's written work is disorganized and messy.
- The student needs to read a passage or story several times before understanding its meaning.
- The student has difficulty following directions.
- The student's work shows poor coherence in the structure of sentences, paragraphs and longer passages.



Methods/Strategies:

Note: *The strategies listed for auditory-processing deficit are appropriate here as well.*

- Allow the student ample time to read silently for practice before asking him or her to read orally.
- Model slow, easy speech for the student and do not interrupt or finish his or her sentence.
- Slow down rate of speaking to allow the child to process the information.
- Assign the student to work with a classroom friend who is a good language model.
- Establish a signal to remind the student to slow down and speak in complete sentences.
- Have the student record his or her speech to teach monitoring strategies.
- Emphasize the use of context cues.
- Provide a language-rich environment.
- Place an alphabet strip on the desk for younger children.
- Encourage the student to read a story more than once.
- Monitor reading material to ensure that the level is appropriate.
- Use high-interest books with accompanying taped version for rereading.
- Teach reading strategies that will help locate information in a text.
- Help the student use associate cues when sequencing events.
- Practice sequential activities.
- Have the child retell stories he or she has read.
- Introduce and explain key vocabulary in context.

- Use a multi-sensory approach.
- Provide intervention in phonemic awareness.

Evaluation Strategies:

- Provide oral testing or a scribe.
- Adjust vocabulary usage in testing to suit the language needs of the child.
- Allow extra time for testing.
- Provide a quiet space for testing.

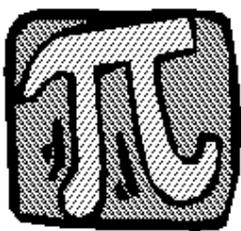


Mathematics Deficit

A **mathematics deficit** is the inability to deal with number and mathematical concepts.

The following is a list of characteristics that may be evident in students with this deficit. Use this as a checklist with regard to students who you think may fit into this category.

- The student has difficulty distinguishing the important from the unimportant details in word problems.
- The student has difficulty recognizing patterns or relationships among numbers.
- The student has difficulty putting facts in a logical sequence in order to find a solution.
- The student has difficulty remembering math facts, formulas or a sequence of formulas.
- The student perseveres with an improper procedure.
- The student does not understand numerical order or place value.
- The student has difficulty with such spatial math concepts as time, money, measurement, directionality and sequencing.
- The student is consistently reluctant to begin any math task.
- The student has difficulty with abstract or symbolic math concepts.
- The student has difficulty copying or reading numbers.
- The student has difficulty choosing the correct process to use.
- The student has difficulty visualizing or verbalizing numeric information.
- The student has difficulty generalizing math information to new situations.
- The student has difficulty with math vocabulary.
- The student often responds with an answer that bears no relationship to the math question asked.
- The student has difficulty with basic calculation/application.



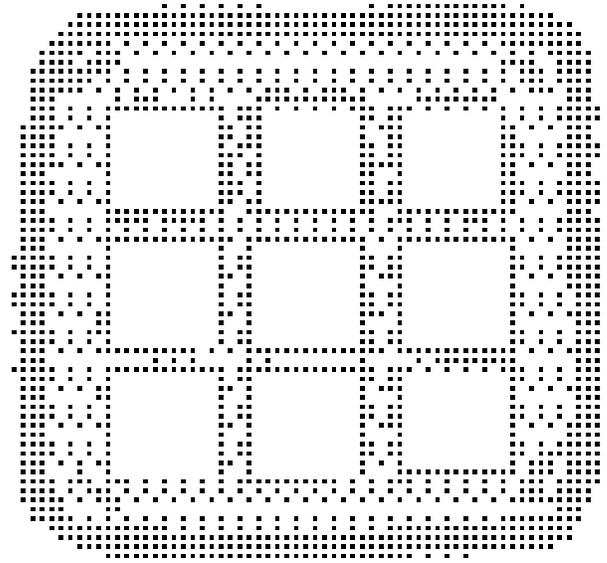
Methods/Strategies:

- Use word problems that relate to the student's experiences.
- Use concrete manipulatives to demonstrate and practise problems before moving to symbolic.
- Encourage the use of a calculator or math charts, ensuring that the process is demonstrated in the child's work.
- Have the child highlight key words for steps, directions or operations in questions given to him or her.
- Use visual cues (e.g. stop signs or red dots) on the paper when the student must change operations. Have the student raise his or her hand when reaching STOP signs, and provide necessary instructions to go on.
- Use colour coding (e.g. green for addition, red for subtraction, etc.).
- Provide extra large symbols next to questions in order that the student will be more likely to observe the symbols.
- Provide practice in math by using a computer software program that gives the student immediate feedback.
- Use large coloured arrows to indicate where the student begins to work a math problem.
- Reduce the number of questions given to the student, but not the level of difficulty.
- For younger students, put a number line on the desk.
- Have a math reference sheet or cue cards that demonstrate the steps to solving a particular type of question.
- Ensure that the student has a clear understanding of the math vocabulary being used.

- Use modeling frequently.
- Have the student work with a classroom peer.
- Teach strategies for checking math work.

Evaluation Strategies:

- Evaluate on daily or weekly basis rather than on lengthy tests or exams.
- If lengthy tests are required, do not mix concepts at one time.
- Allow the use of a calculator or charts.
- Provide a visual model with test questions to demonstrate what is being asked.
- Provide graph paper for lining up numbers when working math problems.
- Use personal experiences when designing math problems.
- Have oral testing for word problems.
- Provide the student with a quiet place to work.
- Allow extra time to complete tests.
- Highlight operational signs so that the student is sure to notice the signs before beginning an operation.
- Highlight key words on a test so that the student is sure to notice the words before answering the question.



Organizational Deficit

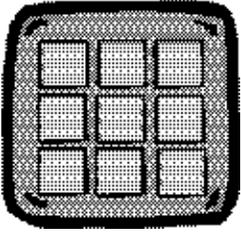
An **organizational deficit** is the inability to internally structure for the purposes of planning, monitoring, and evaluating information.

The following is a list of characteristics that may be evident in students with this deficit. Use this as a checklist with regard to students who you feel will fit into this category.

- The student's personal appearance is disorganized, as are books, locker, desk, assignments and thoughts.
- The student speaks in a rambling, disorganized manner.
- The student is forgetful (e.g. forgets to take assignments home, write out lessons, and/or bring back completed work).
- The student is often late or absent.
- The student is immature or impulsive.
- The student has difficulty making choices or decisions.
- The student shows inconsistent behaviours.
- The student strays from the topic quickly.
- The student procrastinates when faced with a highly structured task.

Methods/Strategies:

- Provide structure and routine.
- State directions clearly and directly. Try not to wander off topic.
- Clearly state the purpose or points to be covered in a lesson prior to beginning. A course or project outline is helpful.
- Print key words on the board prior to each lesson.
- Ensure that students write homework in an agenda or lesson book.
- Using a talk mail set up for at risk students, send a talk mail daily, stating homework requirements.
- Use a binder to help keep materials together.
- Use a colour coding system for subjects.
- Have two sets of books, one for school and one for home.
- Model and teach strategies for approaching a project. Try not to assume that the student knows how to organize this task. Have the student transfer the steps of these strategies onto a recipe card or index card, and tape to the inside of a binder or scribbler.
- Post class rules or learning strategies in a visible location in the classroom.



- Have the child summarize notes or text reading, using visual organizers.
- Provide easy to follow mnemonic devices when available, for remembering

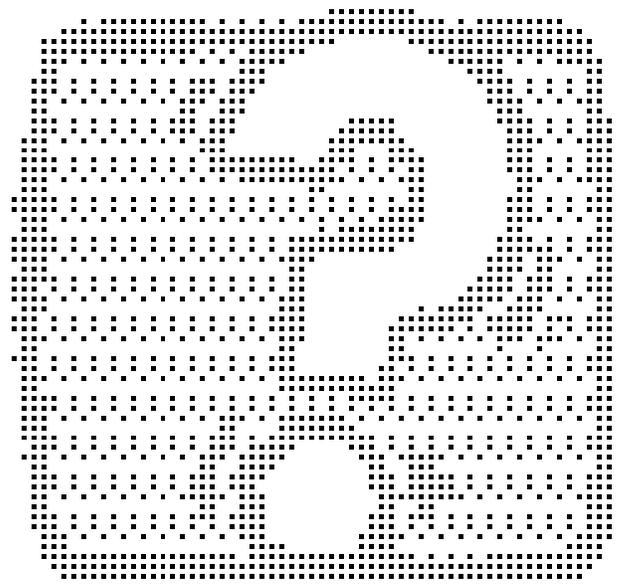
or organizing concepts; e.g. COPS Capitalization, Organization, Punctuation, Spelling... as a mnemonic for proofreading and editing.

- For middle level, post or provide mark value for course components at the beginning of each unit.
- Involve parents in monitoring the student's homework and projects.
- Assign a classroom buddy who will check that homework is written and that the correct books are packed.
- Avoid giving homework verbally without written backup.
- Use co-operative learning techniques when possible to utilize the organizational skills of others.
- Keep an extra folder of handout sheets to replace those "lost" by the student.
- Take a new student on a tour of the school and explicitly point out specific locations such as the gym and art room, as well as taking the student through a day's schedule prior to starting school.
- Allow the student to experience the consequences of disorganization when appropriate.
- Intervene when the student is disorganized.
- Praise and reward the student for good organization.

Evaluation Strategies:

- Provide a scribe to ensure that the child has understood what is being asked of him or her.
- Encourage the use of outlines, maps or visual organizers for tests.

- When designing tests, make use of question types that do not require as much organization; e.g. fill in the blank, true or false, multiple choice.
- Give extra time for testing.
- Present assignments in small chunks.
- Provide a model or example in test items.



Memory Deficit

A **memory deficit** is the inability to retain and recall information.

The following is a list of characteristics that may be evident in students with this deficit. Use this as a checklist with regard to students who you feel may fit into this category.

- The student often does not remember what was done yesterday or the day previous to that.
- The student can remember information for a day or two, but cannot recall over long periods of time.
- The student will ask the same question a second and third time.
- The student can't remember a sequence of events.
- The student can remember that a topic was covered, but cannot recall the details.
- The student forgets how to print his or her name, the street address, simple number facts, names of letters, etc.
- The student forgets homework.

- The student forgets sequence, words, or details from orally presented materials (short-term auditory memory).
- The student has difficulty copying from the board. He or she is slow to complete these tasks and looks up constantly. The copied work may have omissions, additions or substitutions (visual short-term memory).
- The student takes longer to remember information on tests.
- The student answers a previous question when the teacher has asked a new one.
- The student has difficulty with timed oral or written tests.
- The student has difficulty with fill-in-the-blank questions.

Methods/Strategies:

- Use repetitive practice (drill) with these students.
- Use a multi-sensory approach that considers multiple intelligences when presenting information. This enhances memory.
- Present new material in short easy steps.
- Use index cards to keep vocabulary words, spelling words, or number facts at hand.



- Teach the child memory-enhancing strategies such as mnemonics, rhyme, singing, finger math, etc.
- Have the student repeat directions you have given to ensure understanding and retention.

- Write directions on the board.
- Ensure proper and consistent use of an agenda or calendar.

Evaluation Strategies:

- Consider methods other than a written test for evaluation.
- Use multiple choice questioning. Provide a word list when using fill-in-the-blank questioning.
- Use cloze exercises with word choices.
- Encourage the use of visual organizers, webs, or outlines.
- Permit the use of a calculator
- Provide examples on the test to demonstrate what is being asked.

Development of a Special Education Plan

A Special Education Plan according to the *New Brunswick Education Act* is defined as the following:

... an education program for an exceptional pupil is based on the results of continuous assessment and evaluation and which includes a plan containing specific objectives and recommendations for education services that meet the needs of the pupil (Section 1)

A Special Education Plan is necessary for students who require adaptations to their instruction and/or to the material presented. Many children with Specific Learning Disability will require planning to address their individual educational needs.

A Special Education Plan should include an identification of the strengths or talents of the child, and of his or her needs with respect to processing difficulties as identified by the assessment process.

Collaborative planning is an integral part of the development of a Special Education Plan. Students, parents, classroom teachers, resource teachers, administrators, and others that may include guidance counsellors, district personnel, school psychologists, speech/language pathologists share information related to the student, share their goals for the student's future and identify his or her strengths and needs. The collaborative group develops goals for which short-term objectives are then established. Responsibility for implementation and monitoring is also assigned. Roles may be assigned to any member of the collaborative team. The written plan produced from this collaborative effort should include a current level of performance, specific objectives based on the collectively developed goals, as well as

methods, strategies, materials and/or equipment needed to support these objectives. The written plan should indicate the method of monitoring, the reporting of progress, and each team member's responsibility.

For children with Specific Learning Disability, the Special Education Plan will reflect planning based on helping them to further develop in areas of processing weakness; will indicate classroom adaptations to methods of presentation, support, and evaluation that recognize the unique processing needs of these children; and will reflect planning to help the children develop methods of coping with and understanding the uniqueness of their learning needs and talents.

Parents' Role

Parents have an important role to play in the development and implementation of an educational plan for children with Specific Learning Disability. Parents also are an integral part of the support mechanism for both the student and the teacher.

Parents are often the first persons to recognize when the child is struggling with schoolwork, and therefore may be key persons to make an initial request for a referral to the school-based team to initiate the assessment process. They may notice that the child is taking extra time on homework, is unhappy when dealing with certain subjects or avoids certain school-related tasks. They may be concerned about the excessive amount of time their child spends on homework compared to the time others in the child's class spend. Parents often notice behavioural patterns such as a reluctance to go to school, crying spells, or extended periods of sadness that send warning signals that something is amiss.

Parents are a critical component in the referral and assessment process and the planning and implementation that follow. The parent, using some of the general checklists or observation forms as guidelines can help to provide information that augments the teacher's observations of the child in the school setting.

Parents can also provide to the teacher a background history of the early development of the child. Such early developmental history often gives clear warning signs of the possibility of learning disabilities.

As learning disabilities are genetically inherited, parents can provide key information as to the presence of learning disabilities in other family members. If other members of a family have struggled with learning disabilities, then the likelihood of a learning disability being present in the child is much stronger. In presenting

information to parents, the teacher should also recognize that the parent(s) may have a learning disability and adjust his or her presentation accordingly.

Parents are a key component in the development and implementation of a Special Education Plan for their child. Parents who are present at planning meetings can help to establish goals for the child that can be further developed by them in the home. Goals and objectives will be agreed upon by both home and school, and the parents can feel that they have a legitimate stake in the implementation of the Special Education Plan, and can be assigned activities or tasks that can be carried out by them with specific goals in mind. In the development of a plan for the child, the parents may be assigned sole responsibility for parts of it, e.g. researching their child's disability and seeking medical advice, obtaining a tutor, or enrolling the child in outside social activities.

Once a collaborative vision for the child has been established, and all clearly feel that they understand and have a part in the planning process, then the welfare of the child is enhanced. The child's school success is contingent upon parental support and involvement.

Parents should also be a part of continuing planning meetings for the child. Goals and objectives will change from year to year, but the parents should always have a part in helping to address the needs of the child.

Parents often will need support during the difficult period of identification, evaluation and implementation. Teachers should be sensitive to the turmoil that the parent(s) may be feeling. Referral to such groups as the Learning Disabilities Association of New Brunswick can be beneficial to parents at this time.

Coping Strategies

Children with Specific Learning Disability often feel frustration in their day-to-day school experiences. Feelings of being overwhelmed or feelings of depression often accompany the anxiety and tension associated with their struggle to deal with their difficulties.

There are various avenues or strategies that can be introduced into the lives of children with Specific Learning Disability that will help them cope with the difficulties that they face. These “coping strategies” are often initiated by parents and teachers in the hope that the student will begin to develop these skills independently.

Teachers and parents should be aware of the need to build a circle of friends for the student at school and in the community. Socializing may need the direct intervention of parents and teachers if it does not occur on its own. Students with Specific Learning Disability need a peer support group to help them through difficult days. As well, students with Specific Learning Disability will need to develop skills for self-advocacy so that in the future they will be able to indicate to people the adjustments and accommodations necessary for their success in post-secondary institutions and/or the workplace.

Parents and teachers will need to assist the students in the development of positive thinking by fostering their self-esteem. It is often helpful for these children to find an adult mentor who can assist them with their advocacy skills, and who, by modeling, can show them ways of dealing with frustration. Self-esteem is also developed through the identification and fostering of a talent.

More specific coping strategies can be developed through social skills or anger-management groups, through club activities, or through group or personal counselling. Parents and teachers should look at areas that will assist the child to develop skills for independence in adult life.

Most children develop these skills without assistance. Often children with learning disabilities will need explicit teaching in this area. The development of computer keyboarding skills will also be an asset in future life. In addition, parents and teachers will need to identify and develop coping strategies related to assisting the child with academic areas. These strategies, such as study skills, organizational skills, memory strategies, etc., should be considered a toolbox from which the child can choose the appropriate technique or tool.

Anxiety and its associated tension and stress frequently plague children with Specific Learning Disability. Therefore, they need to develop coping strategies to manage their reaction to stress, to help them relax, calm down and focus their energy on the task at hand.

Many of the breathing techniques associated with Yoga or similar philosophies will relax the muscles and counteract the negative effects of the anxiety built up as the child attempts a difficult task. Exercises involving slow deliberate movement are also helpful. Further, visualization techniques and relaxation through the use of soothing music are all stress relievers that can be introduced into the life of the child with learning disabilities to help them cope with their tension. (Adapted from “*How to Reach and Teach ADD/ADHD Children*” by Sandra Rief 1993)

Assistive Technology

Assistive technology can often help to create an environment that nurtures individual styles and creativity and that enables students to focus on their areas of strength. Through assistive devices, assignments and curriculum can be presented so that students can demonstrate their true abilities.

Children with learning disabilities often benefit from the use of computers and other technologies. Students may be taught organizational skills for writing with such programs as *Inspiration* by Inspiration Software Inc., and enhance their finished materials by using the spell check or hand held checks such as the *Franklin Electronic Dictionary* or the *Franklin Language Master* available from Franklin Electronic Publishers. Often these students can be taught keyboarding skills. Laptop computers or desktop keyboards, such as the *Alpha Smart 2000* available from Intelligent Peripheral Devices Inc., allow students to easily transfer work from home to school.

Although still in the stages of being refined, voice activation software allows the students with oral abilities to express their thoughts on paper. Current literature indicates that programs such as *Dragon Naturally Speaking* have proven a great benefit to children with learning disabilities.

The use of touch screens allows access to certain software programs to students for whom the use of a keyboard and mouse are not appropriate access devices. For very young children with fine motor difficulties, a modified mouse may prove beneficial.

For students with memory difficulties, calculators may be necessary for math-related activities. Calculators with larger keys that give tactile feedback may be of assistance to children who are kinesthetic learners.

As well, computer-assisted instruction is often helpful for children with learning disabilities. A number of programs on the market, e.g. *Academy of Reading*[™], *Fast ForWord*[™] and *Plato*[™], all have features which can accommodate individual needs, particularly in basic skill development.

Transition

Because services for students with learning disabilities look very different at elementary, middle and high school levels, appropriate transitioning is of paramount importance.

It is important, prior to school entry, that the school obtain all pertinent information, such as that provided by the age 3.5 screening, that may assist in the identification of possible learning difficulties. Diagnosis of a disability may not have occurred before school entry, but prior information shared with the school may assist in an earlier referral to the school-based team for a child with a Specific Learning Disability. Support may initially be in the form of consultation with parents about the need for assessment. Upon the clarification of needs and necessary support services through a diagnostic process, school-based teams and parents confer to develop a Special Education Plan and implement appropriate strategies.

In the transition from elementary to middle school, information pertaining to the student must be clearly defined. Intervention may be a combination of explicit teaching of weaker skills and consultation/collaboration among teachers, with the long-range goal of increasing the student's independence in the classroom situation. Students must engage in an ongoing process of understanding and accommodating their own needs and styles of learning.

It is imperative that services and adaptations be in place prior to a student attending a new setting to avoid both frustration and anxiety. It is not the parent's responsibility to educate the teachers as to needs and necessary supports. It may be expected that at a high school level students are able to advocate for themselves, but skills to do so are often not in place.

Ideally, in the planning for transition, the case manager for the child (usually the resource teacher) and school personnel from the receiving

school (to include the resource teacher) would meet, prior to the end of the school year before the transition, to familiarize the receiving school with the details of the child's previous planning, and to outline the needed support for the coming year. Educators must ensure that assessment reports, Special Education Plans, accommodation checklists, etc. are passed on to the new school, via the cumulative record and/or through resource or guidance files. It is the responsibility of the receiving resource teacher to make receiving classroom teachers aware of the needs of the children with Specific Learning Disability that may be in their classrooms.

Short Term Remedial Methods for K-3

Currently, in the area of reading and particularly in the area of learning disabilities, there has been much emphasis on early identification of difficulties and the importance of a balanced approach, with the inclusion of explicit teaching of skills as part of that balance. *The National Institute of Child Health and Human Development* has performed longitudinal studies that suggest that a balance of emphasis on comprehension, phonemic awareness, phonics and fluency is critical. (Lyon 1997)

The following programs suggested as examples of short-term interventions have been found to be useful by some school districts and are only a sampling of what might be used for explicit teaching of certain skills.

Reading Recovery

The Reading Recovery Program was first developed in New Zealand by educator and psychologist Marie Clay. It is an early intervention program designed to help low-achieving six-year-old children to learn to read and write. Marie Clay believes that reading failure is preventable for all but a very small percentage of children, and that any remediation beyond grade three is largely unsuccessful. A few teachers in New Brunswick have been given an opportunity to complete a year of training in the program, while others have adapted this program to suit their school's needs and structure.

The program is an individual tutoring program in which a trained person meets with a child for thirty minutes each day outside the child's regular classroom. Although the teacher determines what strategies to use, Reading Recovery lessons operate in a structured framework. Each day teachers and students are involved in five major activities that include the following:

- reading from a book that had been read previously
- the teacher taking a running record of a book that was introduced to a student the previous day to analyse the child's strategies
- the teacher working with letters and sounds
- the child dictating a sentence or a short story pertaining to a book (The teacher records the dictated sentence or story and then rereads it to the child. The teacher then rewrites the message on a strip of paper, cuts it into individual words and asks the child to reconstruct the message. This book and scrambled sentence are both sent home to be read and assembled and brought back the next day.)
- the next day the child reading the book and the sentence being assembled again (A new book is introduced. The process begins again.)

It is recommended that at-risk children receive thirty minutes of daily one-to-one instruction for a period of up to twenty weeks or for a maximum of one hundred sessions.

Phonological Auditory Training – Spell Read

Spell Read P.A.T. is built around the discoveries of Kay MacPhee, a teacher with twenty-eight years of experience and professional training. Kay began her career working with the hearing impaired, and learned techniques to teach them how to use what hearing they had to speak, read and write.

Her success in working with those students brought the request that she consider using the same techniques to help hearing children who were struggling to learn to read and, as a result, were thought to be learning disabled. She quickly realized that the hearing students couldn't "hear" the sounds of the language either, just like the hearing-impaired students could not. As they learned how to automatically recognize and manipulate the individual sounds of the language, their reading and writing skills started to improve. With time, she developed

and refined her techniques, to the point that they proved to be effective with adult students. (From presentation handout given by Duane Pound of P.A.T. – Spell Read)

Early Success

This program available from Nelson, Canada is intended for use with a small group of children. Each of the skill areas involved in comprehension, fluency, phonemic awareness and phonics is taught. The components of the program include reading for fluency, first reading book walk, shared reading, making words, coached reading, individual reading, independent reading, writing sentences, and word wall. The program is not a total language arts program, but rather is designed as a short-term intervention method.

Gift of Dyslexia

This orientation and symbol mastery program, designed by Ron Davis, is intended to assist children who experience difficulties with visual perception. It is a kinesthetic approach to learning letters, symbols, and difficult target words.

Reading Reflex

This program, conceived by Carmen and Geoffrey McGuiness, uses the concept of phonographix and is one of the many programs available that moves from phonological awareness to sound symbol association. This program takes what the child knows, the sounds of his language, and teaches him/her the various *sound pictures* that represent those sounds. It does this through developmentally appropriate lessons.

Academy of Reading

This program is a comprehensive, interactive, multimedia reading program designed to enhance literacy skills in children, adolescents and adults. The program contains a wide variety

of assessment tools and several training programs that help develop the skills necessary for successful reading.

The program contains the following reading measures:

- Phonemic Awareness Test Battery
- Reading Subskills Test Battery
- Word Recognition
- Oral Reading Comprehension
- Silent Reading Comprehension
- Cloze Paragraph Comprehension

On the basis of the assessment, each student is assigned lessons according to his or her needs. The management component of the program tracks the student's progress and provides immediate feedback to both the student and the teacher.

The Academy of Reading is an intervention program for struggling readers. It is not a comprehensive language arts program.

Fast ForWord

Fast ForWord is a patented Internet-and CD-ROM-based training program for individuals with language and reading problems. The product of decades of research in neuroscience and neuropsychology, the program represents a revolutionary approach to understanding language. In an intensive series of adaptive, interactive exercises using acoustically modified speech and speech sounds, Fast ForWord stimulates rapid language-skill development as children learn to distinguish the various components of speech.

As children move into the more challenging levels of the training, the program encourages enhanced language awareness and comprehension. On average, children with language problems make 1 to 2 years of language gains after completion of the 4 - 8 week program.

The program consists of five 20-minute training sessions a day, five days per week, under the supervision of Fast ForWord-trained providers in private clinics and hospitals, public and private schools, or Fast ForWord Learning Centres.

On-screen rewards for successful completion of training segments are supplemented with interesting token economy rewards, which are awarded with the achievement of point goals determined in conjunction with the child and parents.

Results from the exercises are analysed daily and compared with the child's progress to date. The Fast ForWord professional/educator can access the child's historical data and interpretive summaries online that can be shared with parents during scheduled consultations throughout the training.

(www.scientificlearning.com/html/ff/intro.html)

Developing Phonological Awareness: Sequential Examples

1. Have the child clap his or her hands in time to the syllables in a two-syllable compound word, saying the syllables as he or she claps.
2. Have the child draw a dash, from left to right, for each syllable in a two-syllable compound word as he or she says the word. Then ask the child to "read" the dashes in any order designated.
3. Say to the child, "Say baseball; now say ball." Ask what was left out.
4. Say to the child, "Say baseball; now say it again, but don't say ball."
5. Have the child clap his or her hands in time to the syllables of a three-syllable word, e.g. vacation.
6. Have the child draw a dash from left to right for each syllable in a three (or more) syllable word. Then have the child "read" the dashes in any designated order.
7. Tell the child that he or she is going to look for a small word in the words you say. Then say "More. Is the word more hidden in the word morning?" Pause and wait for a response. "Farmer? mortgage? morbid? "
8. Ask the child to find the hidden syllable:
Say "Two; is the word two hidden in the word tomorrow?"
Say "Toe; is the word toe hidden in the word tomorrow?"
Say "Row; is the word row hidden in the word tomorrow?"
Say "Mar; is the word mar hidden in the word tomorrow?"
9. Have the child tell you which part of the word is missing; e.g. say "vacation." Now say "cation". Ask the child which part is missing.
10. Have the child say the word without a specific syllable; e.g. say "Say vacation." Pause and wait for a response. Say "Now say it again but don't say va."

11. Have the child find the hidden beginning sound of a word; e.g. say “Does the word mat begin with /m/?” Say the letter sound not the letter name.
12. Have the child tell you which sound is missing in a word; e.g. say “Say many.” Pause and wait for a response. “Now say any..... What sound is missing?” You are looking for the sound, not the letter name.
13. Have the child say a word and then omit a sound; e.g. say “Say dart.....now say it again without the /d/.”
14. Have the child find the hidden final sound of a word; e.g. say “Say make.” Pause and wait for a response. “Does the word make end with a /k/ sound?” Use a variety of words, some ending with /k/, some with /k/ in the middle of the word, and some with no /k/ sound.
15. Have the child identify the missing final sound of a word; e.g. say “make” ..now say “may.” Ask the child to identify the missing sound.
16. Have the child say a word omitting the final sound; e.g. say “Say pleat. Now say it without the /t/.”
17. Have the child substitute the beginning or final sound; e.g. say “Say table...now say it again, but instead of /t/ say /k/.” “ Say lace. Now say it again, but instead of /s/ say /t/.”
18. Have the child substitute the initial phoneme of a consonant blend; e.g. “Say drip. Now say it again, but instead of /d/ say /t/.”
19. Have the child substitute the second phoneme of a consonant blend; e.g. “Say flee. Now say it again, but instead of /l/ say /r/.”
20. Have the child omit the final syllable in a three-syllable segmentation; e.g. “Say acrobat. Now say it without bat.”
21. Have the child substitute either a short or long vowel in the medial position of a word; e.g. “Say spit. Now say it again, but instead of /i/ say /o/.”
22. Have the child blend three-or four-letter words; the teacher says /k/ /a/ /t/ and asks the child to put the sounds together to make a word.
23. Have the child segment the sounds in a word; e.g. “Say skin . Now say each sound in the word.../s/ /k/ /i/ /n/. ” Make sure the child has given the sounds and not the letter names.
24. Have the child identify rhyming words; e.g. “Do pan and man rhyme?”
25. Have the child produce his or her own rhyming words; e.g. “Give a word the rhymes with bat?”

Accommodations

Memory Devices:

- Charts, tables, number lines
- Calculator
- Mnemonics
- Visual organizers, outlines, maps
- Tactile kinesthetic materials

Note Taking:

- Near rather than far point copying
- Verbal notes on tape
- Photocopied notes
- Student note taker
- Key words and phrases only
- Point-form notes
- Word processor for notes
- Teacher's copy of notes provided

Written Language/Spelling:

- Access to computer with spell check
- Scribe
- Adjusted expectations for length of assignment
- Spelling not counted in daily work or test situations

Reading:

- Taped texts
- Taped novels
- Peer helper for reading
- Large print
- Written directions read to students

Organization:

- Monitoring of student agenda
- Colour coding of notebooks
- Personal calendar/time line assistance

- Division of long assignments into parts
- Organization mentor
- Individual/personal schedule
- Outline provided for all special projects
- Extra set of texts for home

Tutorial Assistance:

- Peer tutor
- Peer helper
- Noon-hour or after-school tutoring
- Mentoring

Testing/Evaluation:

- Scribe
- Small group
- Quiet alternate setting
- Adjusted test format (multiple choice, true/false, etc.) in lieu of essay
- Open book
- Access to computer
- Oral testing
- Practice tests provided or examples given on tests
- Provincial assessment accommodations (see provincial guidelines)
- Blank visual organizers provided with test
- Frequent short quizzes in lieu of exams
- Extra time (usually time and a half)
- Evaluation of daily work only
- Word choices provided for fill-in-the-blank questions

Homework/Study:

- Test outline and preview provided
- Mentor
- In-school study program
- Reduced number of assigned questions
- Extra time for project completion
- Alternate format to written assignment

Suggested Websites

LD Online:

This is an excellent source of information on the topic of learning disabilities. Each week it provides articles on a particular theme related to learning disabilities on its web page. You also have the opportunity to link with a FAQ page, in-depth articles, first-person stories, or a bulletin board.

www.ldonline.org/index.html

CEC: LD

This is the website for the Learning Disabilities division of the Council for Exceptional Children. Some articles are available from this source. It gives links to related sites.

www.bgsu.edu/colleges/edhd/programs/DLD

CLDA

This is the main page for the Learning Disabilities Association of Canada.

<http://educ.queensu.ca/~lda/maine.htm>

CAPD

This is a general webpage on *Central Auditory Processing Disorder* that will give links to further information.

www.theshop.net/campbell/central.htm

CHADD

This is the main webpage for the *Association for Children and Adults with Attention Deficit/Attention Deficit Hyperactivity Disorder*.

www.chadd.org

Fast ForWord

This is the main webpage that gives information on the program *FastForWord*

www.scientificlearning.com/html/educators/prointro.html

Videos:

The following videos are available from WETA Videos,
22-D Hollywood Ave., Ho-Ho-Kus, NJ 07423

“How Difficult Can This Be?” with Richard Lavoie

“Last One Picked..First One Picked On” with Richard Lavoie

“When the Chips Are Down” with Richard Lavoie

For further information on Attention Deficit Disorder, the following videos, available from Child Management, Inc, Carol Stream, IL, are suggested:

“All About Attention Deficit Disorder Part I: Symptoms, Development, Prognosis and Causes” with Thomas Phelan

“All About Attention Deficit Disorder Part II: Diagnosis and Treatment” with Thomas Phelan

Other Resources:

The Academy of Reading program is available from Autoskill International Inc., Ottawa, Canada.

The Fast ForWord program is available from Scientific Learning Corporation, Berkley, CA.

For more information on phonemic awareness, see the following:

- “Phonemic Awareness in Young Children” by Marilyn Jager Adams et. al., Paul H. Brooks Publishing Co. Baltimore, Maryland, 1998; listed in the current Instructional Resources catalogue.
- The Test for Auditory Analysis Skills (TAAS) included with the forms in this booklet is from “Helping Children Overcome Learning Difficulties” by Jerome Rosner, Walker and Company, New York, 1979.

- The Phonological Awareness Profile Test from LinguiSystems. Contact 1-800-PRO IDEA

For more information on P.A.T.-Spell Read, contact Heritage Court, 95 Foundry Street, Suite 114, Moncton, N.B. E1C 8N8

For more information on The Gift of Dyslexia, contact New Discoveries in Learning, P.O. Box 1019, Windsor, CA 95492

For more information on Reading Reflex, contact Read America, Inc. or ask for ISBN number 0-684-83966-0 at a local bookstore.

For more information on Early Success, contact ITP Nelson, 18 George Samuel Drive, Hammonds Plains, N.S. B4B 1L9

For more information on assessment materials, refer to the *“Testing Materials Resource Book”*, M.D. Angus & Associates, Ltd., Canada, 2nd Floor, 2639 Kingsway Ave., Port Coquitlam, B.C. V3C 1T5

Learning Disabilities Association of New Brunswick, 420 York Street, Fredericton, N.B. E3B 3P7. Phone: (506) 459-7852

Dolch Sight Word Lists are available from DLM Teaching Resources, 1 DLM Park, Allen, Texas, 75002

Answer Key for Examples of Processing Difficulties

Example of Difficulty with Visual Processing when Reading

Do you remember the story of the Three Billy Goat's Gruff? There was a big billy goat, a middle size billy goat, and a little one. When they wanted some nice green grass, they would walk across the bridge to a field where the grass was tall and green. But guess who lived under the bridge? Yes, it was a troll.

Example of Language Deficit when Reading

1. The main characters were Blix and Splox.
2. They grummed blantly as they bronted along.
3. Blix and Splox were sniped because the cront was jilp.
4. They were sniped with their bluxy drant.

Example of Difficulty with Comprehension of Visual Material

Little Red Riding Hood

(Here's a little fairy story telling other words – words which are altogether different from the ones in the original version)

Once upon a time there was a little girl who lived with her mother in a little cottage on the edge of a large, dark forest. This little girl often wore a pretty little red cloak with a little red hat, and for this reason people called her Little Red Riding Hood.

One morning Little Red Riding Hood's mother called her and said, "Little Red Riding Hood, here's a little basket with some bread and butter and sugar cookies. Take this little basket to the cottage of your grandmother who lives on the other side of the....."

Bibliography

Books and Manuals

- Alberta Education. Special Education Branch. *Programming for Students with Special Needs: Teaching Students with Learning Disabilities*. Edmonton, Alberta, 1996.
- Catts, Hugh and Tina Vartiainen. *Sounds Abound: Listening, Rhyming, Reading*. East Moline, IL : LinguiSystems Inc., 1993.
- Davis, Ron with Eldon M. Braun. *The Gift of Dyslexia*. Perigree Books, Rev. ed., 1997.
- Guerin, Gilbert and Arlee S. Maier. *Informal Assessment in Education*. Palo Alto, CA: Mayfield Publishing Co., 1983.
- Jager-Adams, Marilyn. *Phonemic Awareness in Young Children*. Baltimore, Maryland: Paul H. Brooks Publishing Co., 1998.
- McCarney, Stephen B., Kathy Cummins Dunderlich and Angela Marie Bauer. *The Pre-Referral Intervention Manual*. Columbia, MO: Hawthorne Educational Services Inc., 1993.
- McCarney, Stephen B. and Angela Marie Bauer. *The Learning Intervention Manual*. Columbia, MO: Hawthorne Educational Services, 1989.
- McGuiness, Carmen and Geoffrey. *Reading Reflex: The Foolproof Phono-Graphix Method for Teaching Your Child to Read*. New York, NY: The Free Press, 1998.
- Rief, Sandra. *How to Reach and Teach ADD/ADHD Children*. West Nyack, NY: The Center for Applied Research in Education, 1993.
- Rosner, Jerome. *Helping Children Overcome Learning Difficulties*. New York, NY: Walker and Company, 1979.
- Sears, Evelyn F. *How to Detect Reading/Learning Disabilities Using The WISC-III*. Newark, DE: International Reading Association, 1997.
- Shalaway, Linda. *Learning to Teach...not just for beginners*. Jefferson City, MO: Scholastic Professional Books, 1998.
- Winebrenner, Susan. *Teaching Kids with Learning Difficulties in the Regular Classroom*. Minneapolis, Minnesota: Free Spirit Publishing Inc., 1996.

Articles

- Bray, Candice M. "Developing Study, Organization, and Management Strategies For Adolescents with Language Disabilities": *Seminars in Speech and Language*, V16, 1 (Feb. 1995) : pgs. 65 - 83
- Freedman, Evelyn and Elizabeth Wing. "Classroom Management and Instruction for Adolescents with Language Disabilities": *Seminars in Speech and Language*, V16, 1 (Feb. 1995): pgs. 46 - 64
- Lerner, Janet W. "Preventing Reading Difficulties in Young Children." National Research Council, March 1998.
- Lyon, G. Reid. "Report on Learning Disabilities Research." LD Online, National Institute of Child Health and Human Development, July 1997.
- Richards, Regina G. "Strategies for Dealing with Dysgraphia." LD Online, May 1999.
- Richards, Regina G. " Writing Made Easier." LD Online, March 1999.
- Shore, Kenneth. " The Disorganized Student": *Special Kids Problem Solver*. Columbus, OH: Prentice Hall, 1998.
- Smith, Judith Osgood. " Behaviour Management." LD Forum – Council for Learning Disabilities, Fall 1995.

Sturomski, Neil. "Teaching Students with Learning Disabilities to Use Learning Strategies." LD Online. The National Center for Learning Disabilities, 1999.

"Visual and Auditory Processing Disorders." LD Online. The National Center for Learning Disabilities, 1999.

"Understanding Processing Deficits." LD Online, May 1999.

Tests

Burns and Roe. *Informal Reading Inventory*, 4th ed. Toronto: Houghton Mifflin Company, 1993.

Kaufman, Nadeen T. *Kaufman Test of Educational Achievement (KTEA)*. Circle Pines, Minnesota: American Guidance Service, 1985.

The Psychological Corporation. *Wechsler Individual Achievement Test (WIAT)*. San Antonio, Texas: Harcourt Brace & Company, 1992.