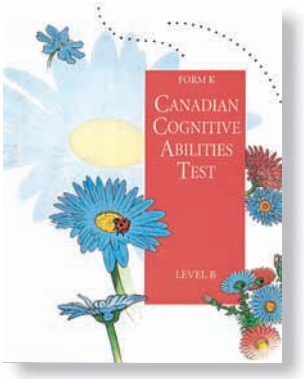
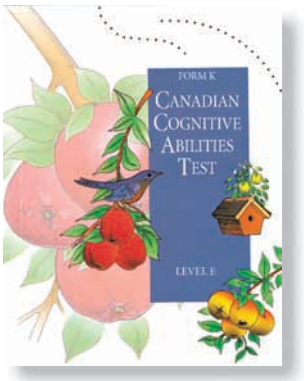
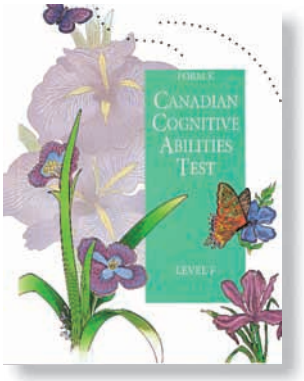
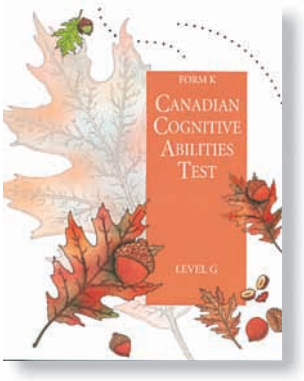








Canadian Cognitive Abilities Test (CCAT)

Grades K–12

Canadian Cognitive Abilities Test (CCAT) is a reliable group assessment tool that will enable you to determine general levels of students' cognitive abilities in three areas: verbal, quantitative, and nonverbal.

How will Canadian Cognitive Abilities Test (CCAT) help you in the classroom?

With the results from CCAT, you will be able to:

- Identify at-risk and gifted students
- Make decisions for grouping students based on scholastic aptitude
- Plan instructional emphases
- Identify strengths on which to build success

Is it reliable?

Yes! *Canadian Cognitive Abilities Test* was developed through trials and use with over 50,000 Canadian students, and normed on over 40,000 Canadian students in Grades K–12 to ensure reliability of results. It was also co-normed with the *Canadian Tests of Basic Skills* (CTBS) to allow for accurate comparison of achievement and ability levels.

What do you need to get started?

- **Test Booklets**: one for every student being tested at one time at each level. These are consumable for Grades K–2, and reusable for Grades 3–12.
- **Answer Sheets** for Grades 3–12: Students read the questions in the Test Booklets and record their answers on the consumable Answer Sheets.
- **Directions for Administration** to ensure proper test administration.
- **Teacher's Handbook** to help you interpret test scores. Case studies and instructional guidelines are also provided to help you with the next steps, as well as instructions for out-of-level testing.
- **Scoring Materials** (See next page)

How much time will it take?

CCAT requires 90 minutes over three sessions. Refer to the chart on the next page for working times in each ability area.

New CCAT Ability Profile Scoring Report!
See pp. 6–10

What do you need to score the tests?

There are three options in scoring:

Hand Scoring—Using a Scoring Key or Scoring Mask, manually check each test and then refer to the Norms Booklet for scores. Refer to the Teacher's Handbook for interpretation.

Computer-Assisted Scoring—Same process as hand scoring (above) but the Score Conversion Software program eliminates the need to refer to the Norms Booklet.

Nelson Scoring Service—Send the Test Booklets/Answer Sheets to us and we'll send your scores and comprehensive reports in just two weeks! For more information on scoring, see pages 20–33.

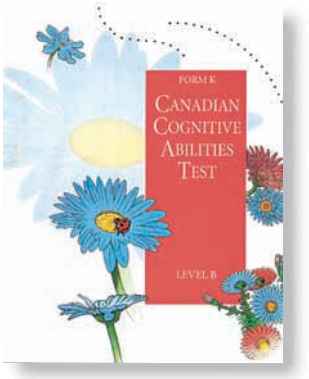
Canadian Cognitive Abilities Test (CCAT) Form K Overview (Chart Below)

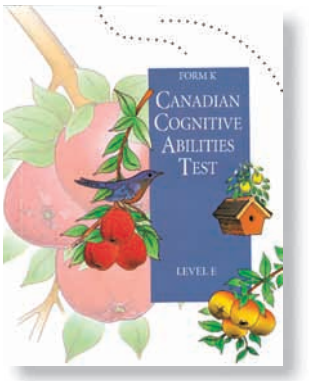
When choosing the test that is right for you, first select your grade and identify the corresponding Test Level below it. Fractional grades represent the number of months completed in the grade (e.g., 1.5 = 5 months of instruction in Grade 1 completed). Numbers in brackets beside each ability area indicate the students' working times in minutes.

Canadian Cognitive Abilities Test (CCAT) Form K Overview

		PRIMARY		LEVELS A–H							
ABILITY	Grade	K.5–1.6	1.7–2.9	3	4	5	6	7	8–9	10–11	12
AREA	Level	1	2	A	B	C	D	E	F	G	H
VERBAL		Verbal Reasoning Oral Vocabulary					Verbal Classification (10) Sentence Completion (10) Verbal Analogies (10)				
QUANTITATIVE		Relational Concepts Quantitative Concepts					Quantitative Relations (8) Number Series (10) Equation Building (12)				
NONVERBAL		Figure Classification Matrices					Figure Classification (10) Figure Analogies (10) Figure Analysis (10)				

***NOTE**: Numbers in brackets are working times in minutes for levels A through H. Out-of-level testing is described in the Teacher's Handbook.*





Canadian Cognitive Abilities Test (CCAT)

Canadian Cognitive Abilities Test (CCAT) is a reliable group assessment tool that will enable you to determine general levels of students' cognitive abilities in three areas: verbal, quantitative, and nonverbal.

Three ways to score!

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Nelson Scoring Service—Send the Test Booklets/Answer Sheets to us and we'll send your scores and comprehensive reports in just two weeks! For more information on scoring see pages 20–33.

Grades K–2

Canadian Cognitive Abilities Test (CCAT) Levels 1–2 will enable you to assess:

- Verbal Abilities (verbal reasoning, oral vocabulary)
- Quantitative Abilities (relational concepts, quantitative concepts)
- Nonverbal Abilities (figure classification, matrices)

Grades 3–12

Canadian Cognitive Abilities Test (CCAT) Levels A–H will enable you to assess:

- Verbal Abilities (verbal classification, sentence completion, verbal analogies)
- Quantitative Abilities (quantitative relations, number series, equation building)
- Nonverbal Abilities (figure classification, figure analogies, figure analysis)

Note: Teacher's Handbook Table of Contents is available online at www.assess.nelson.com

* **Score Conversion Software**—This DOS-based program is compatible with Windows. It converts student raw scores to derived scores which may then be printed out or saved to disk. Further information may be found in the User's Guide, code 608437-1. A free User's Guide is available on request. Reports generated by Score Conversion Software do not have the same appearance as reports generated by the Nelson Scoring Service.

Getting Started Grades K–2

You will need:

- Test Booklet for every student (consumable)
- Directions for Administration
- Teacher's Handbook

You may also need:

- Scoring Key (for hand scoring and computer-assisted scoring)
- Norms Booklet (for hand scoring)

Getting Started Grades 3–12

You will need:

- Test Booklet for every student
- Answer Sheet for every student (consumable)
- Directions for Administration
- Teacher's Handbook

You may also need:

- Scoring Mask (for hand scoring and computer-assisted scoring)
- Norms Booklet (for hand scoring)

New CCAT Ability Profile Scoring Report! See pp. 6–10

V1 V2 Volume discounts are available on marked items—refer to page 36 for further details.

Primary Battery Form K

KEY	ITEM AND PACKAGING		PRICE	LEVEL 1 K–GRADE 1.6 ISBN	LEVEL 2 GR. 1.7–2.9 ISBN
C★	**Test Booklet**	V1	$ 5.05	9780176060817	9780176060824
R★	**Directions for Administration**	V1	$ 8.95	9780176060916	9780176060923
R▲	**Teacher's Handbook** • All Levels	V1	$ 41.45	9780176084196	→
R■	**Scoring Key**	V1	$ 9.95	9780176084080	9780176084097
R■	**Norms Booklet** • All Levels	V1	$ 41.45	9780176084189	→
C●	**Class Record Folder** • All Levels (Pkg. 10)		$ 12.95	9780176084202	→
R●	**Score Conversion Software** • Levels 1 & 2	V2	$186.95	9780176084332	→
	Preview Kit • Levels 1 & 2 (Contains Directions for Administration plus one Test Booklet for Level 1 and for Level 2)		$ 14.45	9780176084226	→

Levels A–H Form K

KEY	ITEM AND PACKAGING		PRICE	LEVEL A GRADE 3 ISBN	LEVEL B GRADE 4 ISBN	LEVEL C GRADE 5 ISBN	LEVEL D GRADE 6 ISBN	LEVEL E GRADE 7 ISBN	LEVEL F GRADE 8/9 ISBN	LEVEL G GRADE 10/11 ISBN	LEVEL H GRADE 12 ISBN
R★	**Test Booklet**	V1	$ 5.45	9780176060831	9780176060848	9780176060855	9780176060862	9780176060879	9780176060886	9780176060893	9780176060909
	Answer Sheets • Hand/Machine Scorable										
C★	(Pkg. 35)		$ 36.00	9780176061111	→	→	same item for all levels	→	→	→	→
C★	(Pkg. 100)	V2	$ 86.75	9780176061029	→	→	same item for all levels	→	→	→	→
R★	**Directions for Administration** Levels A–H	V1	$ 8.95	9780176060930	→	→	same item for all levels	→	→	→	→
R▲	**Teacher's Handbook** • All Levels	V1	$ 41.45	9780176084196	→	→	same item for all levels	→	→	→	→
R■	**Scoring Mask**	V1	$ 22.45	9780176084103	9780176084110	9780176084127	9780176084134	9780176084141	9780176084158	9780176084165	9780176084172
R■	**Norms Booklet** • All Levels	V1	$ 41.45	9780176084189	→	→	same item for all levels	→	→	→	→
C●	**Class Record Folder** All Levels (Pkg. 10)		$ 12.95	9780176084202	→	→	same item for all levels	→	→	→	→
R●	**Score Conversion Software** Levels A–H	V2	$253.45	9780176084349	→	→	same item for all levels	→	→	→	→
	Preview Kit • Levels A–H (Contains Directions for Administration, two sample Test Booklets selected at random, and other illustrative materials. If you wish to review a specific level of the Test Booklet(s), please consider ordering the Preview Kit plus one Test Booklet for each specific level you wish to review.)		$ 15.45	9780176084233	→	→	same item for all levels	→	→	→	→

Using the Nelson Scoring Service?

If using the Scoring Service, you will also need to order the following:

Scoring Service Instructions (one per order)	Test 04	no charge
Building I.D. Sheet (require one sheet per building)	9780176060282	$.07/sheet
Class I.D. Sheet (require one sheet per class or group)	9780176060275	$.07/sheet

Test User Qualifications

All assessment resources listed are Level A Tests, requiring users to have at minimum a Teaching Certificate in order to qualify for purchase.

Ordering Key

R — Reusable: order only for first testing
C — Consumable: will need to reorder for subsequent testing
★ — Essential (all): necessary to give and score the test
▲ — Essential: at least one for any testing program
■ — Essential (HS): necessary if you plan to hand score
● — Optional: need may depend on how tests are to be used

CCAT Ability Profile Overview

Nelson Education is pleased to announce the **CCAT Ability Profile Scoring Report**. This extension of the scoring services for the Canadian Cognitive Abilities Test builds upon the visual elements of the Student Performance Chart, by adding an extensive narrative report for each student.

The CCAT Ability Profile Report suggests **next steps**, beyond the student's numeric test scores.

Each **Ability Profile** is a code that summarizes two aspects of the student's scores on the Verbal, Quantitative, and Nonverbal batteries within CCAT: (a) the pattern of the scores across the batteries (e.g., contrast or similarity); and (b) the general level of the student's performance on the test.

Based on the relationships among the student's scores on the three batteries within CCAT, and the level of those scores, the service first determines the student's Ability Profile code. Then it draws from a library of over 200 narratives to generate a multiple-page report for the student (typically three to five pages per report).

Each school receives an **introduction to the CCAT Ability Profile Report** outlining the way the profiles relate to the level and pattern of scores, as illustrated on the facing page. For each student, a **bar graph** of the student's Age Percentile Rank Scores displays the student's performance in relationship to their age peers across Canada. The bar graph is followed by an extensive **narrative report** that is associated with the student's Ability Profile. Sections of the narrative text cover characteristics and instructional suggestions for students with this profile, plus general instructional suggestions for students at this level, including suggestions to build on strength, focus on working memory, encourage strategic thinking, and more. Please see pages 8–10 for a few pages of a sample student's report.

Teachers who wish to use the CCAT Ability Profile Report in **parent-teacher conferences** might ask:

> "Are we *obligated* to address *all* of the points that are outlined in the narrative?" The answer is "no." The narrative is a collection of suggestions for the teacher to consider.
>
> "Is it possible to suppress the Composite scores on the Ability Profile Report, and to make the bar graph show only the three CCAT batteries?" Yes, this can be done easily through a request to Nelson's Scoring Service, included with your Order for Scoring Service form.
>
> "Is it possible to modify the list of student's scores that appears above the bar graph, to simplify that part of the report?" Yes, this can be done easily through a request to Nelson's Scoring Service. As an example, this set of scores could be a good combination for use in conversations with parents: Percent Attempted, Age Percentile Rank, and Age Stanine.

Principals and teachers may wish to **focus on a particular subgroup of students**, instead of receiving an Ability Profile Report for *every* student who was tested. This can be accomplished in a number of ways. On your Order for Scoring Service, you may request that the CCAT Ability Profile Report be produced for all of the "low-ability" students, i.e., those with any Ability Profile code that starts with 1, 2 or 3. Or you may request that the report be produced for all "very-high-ability" students, i.e., those with any Ability Profile code that starts with 9. Or you may ask for the report to be produced for any student who has a "C" (contrast) or "E" (extreme) profile. Or you may use some combination of these techniques.

If a **pre-identified collection of students** within a class or school is known in advance of the testing, the Other Information grid on the students' answer sheets may be pre-coded as 1 (for "yes") or 9 ("no"), as an indicator for generating the Ability Profile Reports. Please call Nelson's Scoring Service for details.

Special pricing is available when the regular CCAT Student Performance Chart (OS-28) is ordered in combination with the new CCAT Ability Profile Report (OS-28-AP). Please call for details.

CANADIAN COGNITIVE ABILITIES TEST™

System NORTH OF EIGHTY SD#1 Form K
Building MAPLE HEIGHTS SCHOOL

CTBS 40 CCAT Years

OS-28 Student Performance Chart with Ability Profile Page 1

Tested 2009/01, Midyear Norms Pkg# 20527

INTRODUCTION to the STUDENT PERFORMANCE CHART with CCAT ABILITY PROFILE

Authors of the Canadian Cognitive Abilities Test (CCAT) encourage teachers to focus on the student's scores on the three batteries within CCAT -- Verbal, Quantitative, and Nonverbal -- rather than on the student's Composite score. The scores on the three batteries determine each student's Ability Profile.

A profile captures two things. First, it identifies whether some score(s) are significantly higher or lower than the other scores -- this is called the pattern of scores. Second, it indexes the overall height, or level, of the scores. The same pattern, say a higher score on the Verbal Battery than on the other two CCAT batteries, often has different implications for instruction if the general level of scores is low than if it is high.

How can we know if a Verbal score is significantly higher (or lower) than a Quantitative score? All test scores have some statistical error of measurement, so the difference between scores, to be considered significant, should be larger than the error in either score. For most test takers, these errors are about the same size and can be estimated from the test's reliability coefficients (the technique used in this report).

Based on the relative strength or weakness between the student's scores on the three CCAT batteries, the student's performance is classified as having an A, B, C, or E pattern.

"7B (Q+)" --- each Ability Profile starts with a number that represents the general level of the student's performance -- this is the student's median Age Stanine score for the three CCAT batteries. The Ability Profile also includes the pattern (A, B, C or E), plus, if applicable, some letter(s) to reflect the student's relative strength or weakness in the three batteries (V, Q, N).

LEVEL OF SCORES

The level of performance is indicated by the number in the profile: e.g., if the student has Age Stanine scores of 6, 3, and 8 on the CCAT batteries, the student's median Age Stanine would be 6. This number is the best estimate of the student's typical level of reasoning ability, and it would be the baseline against which any relative strength or weakness might be measured.

In general, the profile number (median Age Stanine) carries the most information for "A" profiles, less for "B" profiles (now we must also consider the strength or weakness), still less for "C" profiles, and the least information for "E" profiles.

Sometimes "words" are preferred over "numbers". Stanines may be grouped as follows: 9 = Very High; 7-8 = Above Average; 4-5-6 = Average; 2-3 = Below Average; and 1 = Very Low.

THE "A" PROFILES

In an "A" profile, the student's Verbal, Quantitative, and Nonverbal scores are at approximately the same level. Tip: remember the "A" in "Approximately" and in "sAme". There is only one other piece of information provided by the test scores, and that is the overall height, or level, of the profile. This type of profile is what we would expect if cognitive reasoning ability could be defined as a single dimension. It is the pattern assumed whenever a student's cognitive ability is summarized in a single test score. About one-third of students will obtain one of the "A" profiles, e.g., profile "7A" or profile "2A".

THE "B" PROFILES

In a "B" profile, one of the three battery scores is above or below the other two scores. Tip for "B" profiles: remember the "B" in "aBove" or "Below". The student shows a relative strength (when one score is above the other two) or a relative weakness (when one score is below the other two). For example, a profile "3B (V+)" means that the scores show a B pattern with a strength in verbal reasoning; similarly, "9B (N-)" means a relative weakness on the Nonverbal Battery. Overall, approximately 40 percent of students obtain one of the "B" profiles. The "B" profiles are more common than the "A" profiles.

THE "C" PROFILES

The tip for this profile is to remember "C" for the "Contrast" in the pattern. The student shows a relative strength and a relative weakness. This pattern is much less common -- about 14 percent of students have one of the "C" profiles. As an example, a student who shows a relative strength on the Verbal Battery and a relative weakness in Quantitative could have a "5C (V+ Q-)" profile.

THE "E" PROFILES

In some cases, the B or C pattern for some students may be much more extreme than for other students. While considering the "4B (V+)" profile, and referring to Standard Age Scores (SAS), suppose our student has a Verbal score that is 30 points higher than their lowest score on the other two batteries -- this would cause a "4E (V+)" profile to be assigned. A 30-point difference would surely have greater impact for teaching than another "4B (V+)" student with a much smaller difference, say 11 points on the SAS scale.

The authors call any profile in which there is a difference of 24 or more SAS points between two scores an "E" profile, with "E" for "Extreme". Approximately 14 percent of students show one of the "E" profiles.

Printed: 2009 JUN 09

CANADIAN COGNITIVE ABILITIES TEST™

System NORTH OF EIGHTY SD#1 Form K
Building MAPLE HEIGHTS SCHOOL Level B
Teacher ABBY PROFILE Grade 4

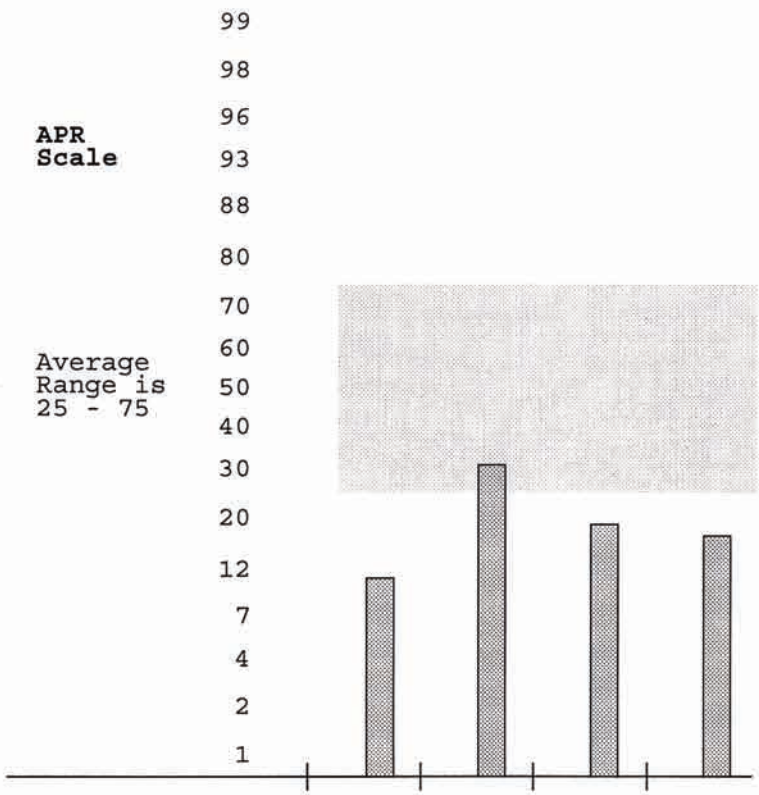
CTBS 40 CCAT Years

OS-28 Student Performance Chart with Ability Profile

Tested 2009/01, Midyear Norms Pkg# 20527

Last Name First Name Gender	Scores	= V == Verbal	= Q == Quant-itat.	= NV = Non-verbal	= C == Comp-osite
BOSMAN	% Att	100%	100%	100%	
▨ TAZ	RS	* 21	32	28	
M	SAS	80	92	86	85
	APR S	11 3	31 4	19 3	17 3
	GPR S	*10 2*	*31 4*	*21 3*	*16 3*

Birth Date is Jan. 1999.
Age is 10 years, 0 months.



Legend: %Att = Percent Attempted, RS = Raw Score, SAS = Standard Age Score
APR = Age Percentile Rank, GPR = Grade Percentile Rank, S = Stanine

ABILITY PROFILE 3C (Q+ V-) Column 1 of 6

PROFILE EXPLANATION

Students who obtain this profile have generally below-average scores with a relatively lower score in verbal reasoning and a relatively higher score in quantitative reasoning. They have a median age stanine for the three CCAT batteries in the below-average (stanine 3) range. The majority of these students have a Composite score between the 1st and 25th percentiles of their age group. Although the overall level of reasoning abilities estimated by the median stanine provides useful information, generalizations must be qualified by the student's relatively lower score on the Verbal Battery and relatively higher score on the Quantitative Battery.

CHARACTERISTICS OF STUDENTS WITH THIS PROFILE

On achievement tests, these students tend to show much higher than expected scores on math computation but slightly lower scores on most other subtests. Only in the primary grades is there any indication of slightly higher achievement on the math concepts and math problem solving subtests. Therefore, the relative strength in quantitative reasoning appears to be fairly specific.

INSTRUCTIONAL SUGGESTIONS FOR PROFILE 3C (Q+ V-)

These students will have difficulty learning in unstructured environments, especially when required to transfer, adapt, or reason with abstract concepts. They will generally learn best when (1) instruction does not overburden working memory, (2) there is much opportunity for practice, and (3) the context is real and concrete rather than hypothetical and abstract.

Ordinarily, teachers should try to find ways to build on the students' strengths. For most of these students, however, their strength in quantitative reasoning is confined to relative facility in computation skills. While these skills certainly can be recognized and used to encourage the students in other activities, they do not provide a broad basis for improving thinking in other domains. For these students, the critical need is for remediation of their verbal reasoning skills. This is because the relative deficit in verbal reasoning has a broad impact on classroom learning, whereas a relative strength in

[Profile continues on next page]

Printed: 2009 JUN 09

computation affects a fairly narrow domain.

Many students who show below-average scores on CCAT achieve in the average range in the classroom. This commonly occurs when the students have been well supported in learning. Such students often do well on tasks explicitly practised in the classroom but have difficulty on unfamiliar tasks that require them to assemble and revise new ways of solving problems. If so, they will have greater success learning abstract and unfamiliar concepts if their problem solving skills can be made more transferable. Encourage this by presenting tasks that require a common skill or strategy but in increasingly unfamiliar contexts. This is best done over days, weeks, and even months as students must gradually stretch their learning to increasingly unfamiliar domains.

Programs specially designed for these students will be most successful if they provide much structure, individual guidance, and modelling. It is sometimes helpful to think of their achievement in terms of participation in activities and not just in terms of the acquisition of knowledge and skills. The participation metaphor emphasizes social learning and group processes in which learners who have different levels of competence all participate in a common activity, each doing what he or she can. Learners are always observing more competent performers. Teachers or other group leaders should look for ways to support performances so that all students gradually learn to participate in the activity at more advanced levels.

These students will learn best from real activities that they enjoy, that engage all their senses, and that allow many different modes of participation.

GENERAL INSTRUCTIONAL SUGGESTIONS FOR ALL STUDENTS WITH A MEDIAN STANINE OF 3

A) BUILD ON STRENGTH

When working with these students, it is often helpful to look for strengths in terms of specific interests and achievements. Even more than other students, these individuals will often learn more and sustain their efforts longer if the teacher is able to discover and build upon their interests. For example, if a student is interested in baseball, then reading, writing, social

studies, and even science projects can be designed that use baseball as a vehicle for teaching other skills. Of course, it is neither possible nor desirable to adapt all learning to suit a student's interests, but to the extent that it occurs, it will lead to greater effort, and, at times, to more sophisticated learning.

B) FOCUS ON WORKING MEMORY

Attending carefully to the demands placed on working memory can reap even greater benefits for students with poor reasoning skills than for other individuals. Students with this profile are commonly required to do more things at one time than they can do. This is both exhausting and frustrating. Learning may be meaningful at first, but it soon degenerates into an anxious search for surface features that suggest a solution.

Since the primary burden on working memory comes from the concepts, images, sound sequences, and sentences the student must hold in mind, the most effective way to improve performance is to reduce the number of things that must be processed simultaneously. Consider, for example, the seemingly simple task of taking notes in class. In order to take good notes, the student must be able to write one thing while listening to another. Making sense of what is heard can require much additional processing. If the speaker is talking about an image, it must also be perceived or imagined. All this must occur more or less simultaneously with the note taker quickly shifting attention among different subtasks. If possible, reduce working-memory burdens by making it unnecessary to hold all of this information in mind at once.

Working-memory burdens can also be reduced by (1) using familiar concepts, (2) making concrete analogies, (3) applying skills that are automatic (such as writing or typing) if they must be performed simultaneously, and by (4) offloading items that must be remembered, processed, or performed simultaneously.

C) SCAFFOLD WISELY

Good reasoning involves what some psychologists call selective encoding. Selective encoding means knowing what to attend to and what to ignore when trying to understand a problem. Students who have below-average levels of reasoning abilities often have

[Profile continues on next page]

CANADIAN COGNITIVE ABILITIES TEST™

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Teacher ABBY PROFILE Grade 4

CTBS 40 CCAT Years

OS-28 Student Performance Chart with Ability Profile Page 40

Tested 2009/01, Midyear Norms Pkg# 20527

BOSMAN TAZ

ABILITY PROFILE 3C (Q+ V-) Column 4 of 6

difficulty identifying where to focus their attention in a learning situation; therefore, they need very specific directions before beginning a task. The use of attention-getting directions can help these students focus on the important aspects of a task, particularly in reading. Teaching them how to formulate questions of their own to guide their reading or check their understanding of materials also helps them become more-effective learners.

Frequently, students who have below-average levels of reasoning abilities do not have the knowledge base or the level of general cognitive skills necessary for structuring and organizing material. They often do not know how to make material meaningful or how to judge what is important and relevant to learn and remember. As a result, these students tend not to learn effectively in unstructured situations. Typically, students who have below-average levels of reasoning abilities learn more effectively in structured environments that make fewer demands on their cognitive resources and provide more direct guidance, coaching, and support. Such students also tend to process information slowly and to need a somewhat slower pace of instruction than other students. The majority of these students have poorly developed listening comprehension skills, so they are not likely to learn effectively in highly verbal environments. Instructional strategies that use teacher or peer modelling, concrete representations of abstract concepts, demonstrations, pictures or other types of illustrations, films, videos, and hands-on activities are likely to be more effective than exclusively verbal learning strategies. These students need extensive practice to master a skill and frequent review to maintain the skill. Short periods of practice or review two or three times each week are more effective than one long period every two weeks.

A critical issue for instructional programming for these students is the tradeoff between short-term gains and the development of long-term competence. Highly structured environments that remove the information-processing burden from the learner almost invariably result in higher achievement for such students. When offloading processing burdens, however, there is a tendency to dispense with higher-order reasoning processes and retain lower-order memory and skill-execution processes. However, by not routinely practising the higher-order processes of discovering relationships and patterns or systematically breaking down a complex problem into simpler, more soluble parts, the student is

ABILITY PROFILE 3C (Q+ V-) Column 5 of 6

left less able to engage in such higher-order thinking on the next occasion. Therefore, to the extent possible, instruction should scaffold lower-order processes and memory burdens and encourage reasoning and meaning-constructing abilities.

D) ENCOURAGE STRATEGIC THINKING

Students who struggle to keep up may follow procedures that get them through a task but that are not generally useful. Working alone on tasks that are poorly understood can thereby leave these students less prepared for future learning than they were before attempting the tasks. When practised, incorrect or ineffective ways of solving problems or performing tasks can often be learned even more readily than correct or more efficient methods. It is critical, therefore, that students with this profile be carefully monitored during the early phases of skill acquisition to ensure that they understand the procedure or strategy and are applying it correctly.

Since these students have difficulty identifying appropriate situations in which a particular strategy should be used, the teaching of learning strategies is likely to be much more effective if it is done by modelling and demonstration in the context of ongoing learning situations in the classroom. Modelling the skills comes before prompting students to use them for appropriate schoolwork. Reviewing previous instruction that is related to a new learning task, giving students hints about previous experience that is relevant, and prompting them to think about how they are going to accomplish a learning task can help them become more systematic in their approach to learning.

Students whose score profiles are below average are also likely to need frequent prompting to use a strategy in appropriate situations as well as monitoring to check whether they are using the strategy correctly. These students may not realize that they did not understand reading material or an assignment or that they made an error. They need help to develop self-monitoring skills, but until they do, these students will probably learn more effectively by working with a partner or in a small group of students who use the skills correctly than from working alone. In such settings, the more-able peers can provide the guidance these students need in order to focus on relevant aspects of a task, to keep track of what they are doing, and to avoid making errors and then practising the errors.

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Printed: 2009 JUN 09