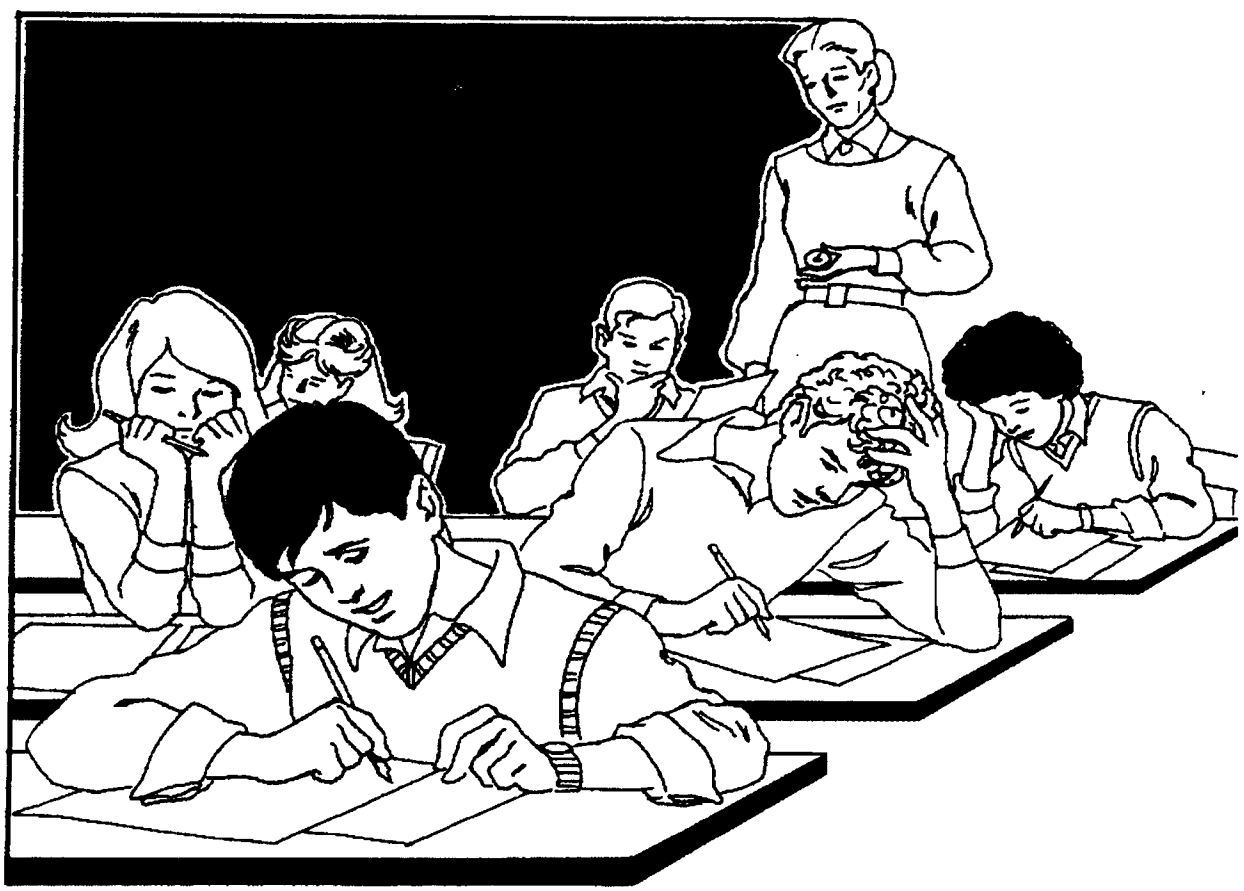
PEEL DISTRICT SCHOOL BOARD
Research and Evaluation Department - Program Services

putting research into practice

Regional Student Testing Program Annual Report

2000 - 2001 School Year



January 2002

PEEL DISTRICT SCHOOL BOARD
Research and Evaluation Department - Program Services

Regional Student Testing Program Annual Report

2000 - 2001 School Year

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Peel District School Board

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REGIONAL STUDENT TESTING PROGRAM
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EXECUTIVE SUMMARY

All Peel Grade 4 students are tested annually on the **Canadian Achievement Test**, second edition (**CAT/2**). Students complete the following test batteries:

(1) **Reading** (including vocabulary, reading comprehension, and total reading)
(2) **Spelling**
(3) **Mathematics** (including concepts & applications, computations, and total math)

The CAT/2 is a standardized achievement test that provides a measure of students' basic skills in Reading, Spelling and Mathematics. The CAT/2 covers what is typically taught to most students, at a given grade level, in the majority of school boards across Canada. It gives us a view of students' basic skills in a nation-wide context and it answers the question "How are our students performing?"

In April, 2001, 7,777 Grade 4 students were tested on the CAT/2. For this report, both the current and a five-year longitudinal view of student performance are provided.

Peel results are presented as percentile scores. Percentile scores tell us what percent of the national norm group obtained a higher or lower score than our students. For example, *60th percentile* means that our students scored as high, or higher than, 60% of the norm group, and lower than 40% of the norm group. A percentile score is not the same as a "percent correct" score.

Standardized test results are only one piece of a comprehensive assessment picture. They provide broad-based information about basic skills, but decisions about students and/or their programs are based on a variety of formal and informal assessments.

In order to provide a context for the CAT/2 results, selected items from the 1999-2000 EQAO Grade 3 student questionnaire data are also summarized. The Grade 3 students who completed the EQAO assessments in the 1999-2000 school year are the same students who completed the CAT/2 in the 2000-2001 school year.

Overview of CAT/2 Results

Total Group

- The average achievement levels for Grade 4 students were at or above the national average (50^{th} percentile) in all of the achievement areas tested in the CAT/2.

- The results in descending order were as follows: Math Concepts and Applications (65^{th} percentile), Spelling (62^{nd} percentile), Total Math (59^{th} percentile), Total Reading (59^{th} percentile), Reading Comprehension (56^{th} percentile), Vocabulary (54^{th} percentile), and Math Computations (51^{st} percentile).

- The 2000-2001 results show essentially the same trend as the Peel five-year averages, with a significant increase in Math Concepts and Applications (54^{th} to 65^{th} percentile change across the five years).

Gender Breakdown

- Grade 4 females scored higher than males in Reading Comprehension (60^{th} vs. 53^{rd} percentile) and Spelling (65^{th} vs 58^{th} percentile).

- There were no gender differences in Vocabulary, Total reading, or in any of the Mathematics sub-tests.

Home Language Breakdown

- Students who speak English at home scored higher than students who speak another language at home on the following sub-tests: Vocabulary (56^{th} vs 47^{th} percentile), Reading Comprehension (58^{th} vs 50^{th} percentile), Total Reading (61^{st} vs 52^{nd} percentile).

- Students who speak English at home and students who speak another language at home show similar scores in Spelling and Math Concepts and Applications.

- Students who speak another language at home scored higher than students who speak English at home in Math Computations (61^{st} vs. 49^{th} percentile) and Total Math (64^{th} vs. 58^{th} percentile).

Type of Program Breakdown

- French Immersion students scored significantly higher than their non-immersion peers in the Reading, Spelling, and Mathematics sub-tests.

Overview of Grade 3 EQAO Student Questionnaire Results

The majority of Grade 3 students reported that they liked reading (83% of females, 70% of males), writing (73% of females, 59% of males) and mathematics (62% of females, 70% of males). More female students like reading and writing than their male counterparts and more male students liked mathematics than their female counterparts.

More female students than males students reported that they were good readers (65% vs. 59%) and writers (57% vs. 49%) and more male students reported that they were good at mathematics than their female counterparts (60% vs. 44%).

More females than males reported doing reading (58% vs. 49%) and writing (55% vs. 44%) that was not part of their work at school. No gender differences were found with males and females reporting doing mathematics that was not part of their work at school.

KEY CONCEPTS

STANDARDIZED TESTS contain a fixed set of items written by specialists. The test developers also provide specific instructions for administering, timing, and scoring the test, which must be followed exactly as given. This helps ensure that the testing conditions are the same for all students.

STANDARDIZED ACHIEVEMENT TESTS are designed to provide a "big picture" of students' basic knowledge and skills in particular content areas. Because these tests are based on educational goals commonly found in curricula across Canada, they cover what is typically taught to most students in most school boards at a given grade level.

TEST NORMS; NORM GROUP. Test norms are the average CAT/2 scores of a large cross-section of students across Canada. Norms allow us to compare our students' performance to the typical scores of peers across the country. The national group of peers who completed the CAT/2 is called a *norm group*. Standardized tests are sometimes called *norm referenced* tests because they allow us to reference our students' performance to that of a norm group.

STUDENT PERFORMANCE REPORTED AS PERCENTILE SCORES. Students' "raw scores" (i.e., number correct) can be changed into types of scores that allow us to compare performance on different tests or determine whether achievement is above or below average. One such score is the percentile - this is the type of score used to present Peel results.

A percentile score places our students' performance on a scale from 1 to 99. It tells us what percent of the national norm group obtained a higher or lower score than our students. A percentile score is <u>not</u> the same as a "percent correct" score.

As an example, *60th percentile* means that our students scored as high, or higher than, 60% of the norm group, and lower than 40% of the norm group. Because of the way standardized tests are constructed, the national average always falls at the 50th percentile.

EXPECTED PATTERN OF RESULTS ON STANDARDIZED TESTS. Standardized achievement tests are constructed so that approximately half of the norm group score in the middle or "average" range, one quarter score at the high end, and the other one quarter achieve below-average scores. For this reason, the national average always falls at the 50th percentile. It is expected that any large population of students (like Peel) will show a very similar pattern of scores – that is, about half of the students will score in the middle range.

Because so many students cluster around the middle of the score distribution, differences in scores near the middle of the scale (e.g., within the 45^{th} and 55^{th} percentile range) do not usually represent true differences in performance.

Peel District School Board

REGIONAL STUDENT TESTING PROGRAM
Annual Report, 2000-2001

INTRODUCTION

All Peel Grade 4 students are tested annually on the **Canadian Achievement Test**, second edition (**CAT/2**). Students complete the following test batteries:

(1) **Reading** (including vocabulary, reading comprehension, and total reading)
(2) **Spelling**
(3) **Mathematics** (including concepts & applications, computations, and total math)

The CAT/2 is a standardized achievement test that provides an estimate of students' present level of knowledge and skills in Reading, Spelling and Mathematics. The CAT/2 covers what is typically taught to most students, at a given grade level, in the majority of school boards across Canada. It gives us a view of our students' basic skills in a nation-wide context.

In April, 2001, 7,777 Grade 4 students were tested on the CAT/2. This testing program has been in place for several years, however for this report, both a current and a five-year longitudinal view of student performance are provided.

Peel results are presented as percentile scores. Percentile scores tell us what percent of the national norm group obtained a higher or lower score than our students. For example, *60th percentile* means that our students scored as high, or higher than, 60% of the norm group, and lower than 40% of the norm group. Note that a percentile score is <u>not</u> the same as a "percent correct" score.

Standardized tests are constructed so that about half of the norm group scores in the middle or "average" range. For this reason, the national average for all CAT/2 sub-tests falls at the 50^{th} percentile. It is expected that any large population of students (like Peel) will show a very similar pattern of scores – that is, about half of the students will score in the middle range. Because so many students cluster around the middle of the score distribution, differences in scores near the middle of the scale (e.g., within the 45^{th} – 55^{th} percentile range) do not usually represent true differences in performance.

It is important to remember that standardized test results are only one piece of a comprehensive assessment picture. They provide some broad-based information about knowledge and skills, but decisions about students and/or their programs must be based on a variety of formal and informal assessments.

In order to provide context to the CAT/2 results, selected items from the 1999-2000 EQAO Grade 3 student questionnaire data and home questionnaire data are also summarized. The Grade 3 students who completed the EQAO assessments in the 1999-2000 school year are the same students who completed the CAT/2 in the 2000-2001 school year.

Purposes of the Peel Regional Student Testing Program

The Regional Student Testing Program was designed to:

1. Ensure that all students' records contained a common piece of objective assessment information. It was emphasized that such test scores would constitute only *one part* of the assessment information used in decision making for any student.
2. Provide data to support judgments about the effectiveness of programs.
3. Enable the Board to report to the public on the annual achievement of Peel students, relative to a nation-wide sample of students.

Who Participates in the Peel Regional Student Testing Program

Table 1 provides an overview of the current Peel Regional Student Testing Program, identifying the type of Grade 4 students who are included in the testing process and those who are exempted.

TABLE 1: Overview of The Current Peel Regional Student Testing Program

AREAS TESTED	TEST USED	WHO IS TESTED	WHO IS EXEMPTED
READING Vocabulary Reading Comprehension Total Reading **SPELLING** **MATHEMATICS** Concepts & Applications Computations Total Math	Canadian Achievement Test, Second Edition **(CAT/2):** Academic achievement test; answers the question, "How are our students performing?"	Grade 4 students are tested annually These students are tested: • Some Stage 3 and all Stage 4 ESL/ELD students • French Immersion students. • Students in behavioural programs. • Students in enhanced learning programs (all modes). Note: ESL = English as a Second Language ELD = English Literacy Development	These Grade 4 students are exempted from testing: • All students in contained SLD programs (including Special Programs). • All GLD and developmentally challenged students. • All Stage 1 and Stage 2 ESL/ELD students and some Stage 3 ESL/ELD students (at the discretion of the principal, classroom teacher, and/or ESL/ELD teacher)

Table 2 presents the number of Grade 4 Peel students tested on the CAT/2 in 2000-2001. Examination of Table 2 indicates that 93% of Grade 4 students in Peel were tested on the CAT/2 in 2000-2001 and 7% of students were not tested.

TABLE 2: Number / Percent of Students Tested & Not Tested

Number of Grade 4 Students Tested	**7,777 (93%)**
Number of Students Not Tested **Reasons Provided..... 540** Deemed Stage 1 or Stage 2 ESL/ELD.....365 Deemed Exceptional - communication, physical, behavioural, intellectual.....149 Other Reasons.....26 **No Reasons Provided..... 10**	550 (7%)
Total Number of Grade 4 students	**8327**

PEEL CAT/2 RESULTS
Reading, Spelling, and Mathematics
Grade 4, 2000-2001

Peel Grade 4 students are tested annually on the Canadian Achievement Test, Second Edition (CAT/2). This test provides a broad overview of students' present knowledge / skills in Reading, Spelling, and Mathematics, compared to a national peer group.

Table 3 presents the 2000-2001 CAT/2 results for Grade 4 student performance on the Reading, Spelling and Mathematics sub-tests. Percentiles for the total Grade 4 group are presented as well as the results broken down by gender (male / female), home language (English / Other), and type of program (French Immersion / Non-Immersion). Five-year Peel averages (1996-2000) are also presented.

READING

Reading Results for All Students

- Average scores for the 7,777 Grade 4 students in Peel fall within the mid-range (45^{th} - 55^{th} percentile) of percentiles for Vocabulary (54^{th} percentile) and Reading Comprehension (56^{th} percentile) and slightly above the national average for Total Reading (59^{th} percentile). Peel Grade 4 performance in CAT/2 Reading is very similar to or slightly above that of the national norm group of Grade 4 students.

- The 2000-2001 Grade 4 scores in the Reading sub-tests are slightly higher than the Peel five-year average: Vocabulary (54^{th} vs 49^{th} percentile), Reading Comprehension (56^{th} vs 51^{st} percentile), and Total Reading (59^{th} vs 54^{th} percentile).

Reading Results by Gender

- There were no gender differences in Vocabulary scores. Females scored higher then males in Reading Comprehension (60^{th} vs 53^{rd} percentile) and Total Reading (61^{st} vs 57^{th} percentile).

- This year, males scored higher in Vocabulary (53^{rd} vs 48^{th} percentile), Reading Comprehension (53^{rd} vs. 46^{th} percentile), and Total Reading (57^{th} vs. 50^{th} percentile) relative to the Peel five-year averages. Female scores in Vocabulary, Reading Comprehension, and Total Reading show no variation from the Peel five-year averages.

Reading Results by Home Language

- Students who speak English at home scored higher than students who speak another language at home in Vocabulary (56th vs 47th percentile), Reading Comprehension (58th vs 50th percentile), and Total Reading (61st vs 52nd percentile).

- Students who speak English at home and students who speak another language at home show a slight increase from the Peel five-year average for these two groups in Vocabulary, Reading Comprehension, and Total Reading.

Reading Results by Type of Program

- French Immersion students achieved higher scores than Non-Immersion students in Vocabulary (67th vs 53rd percentile), Reading Comprehension (69th vs 55th percentile), and Total Reading (73rd vs 58th percentile).

- French Immersion students scores in Vocabulary, Reading Comprehension, and Total Reading show no variation from the Peel five-year averages. Non-Immersion students scored slightly higher in Total Reading (58th vs 52nd percentile) than the Peel five-year average for this group.

SPELLING

Spelling Results for All Students

- Average scores for the 7,777 Grade 4 students in Peel fall significantly above the mid-range of percentiles for Spelling (62nd percentile). This means that Peel Grade 4 performance in Spelling is higher than that of the national norm group of Grade 4 students.

- The 2000-2001 Grade 4 scores in Spelling are slightly higher than the Peel five-year average (62nd vs 57th percentile).

Spelling Results by Gender

- Females scored higher than males in Spelling (65th vs 58th percentile).

- Males scored slightly higher in Spelling than the Peel five-year average (58th vs 53rd percentile).

Spelling Results by Home Language

- Students who speak another language at home scored slightly higher than students who speak English at home in Spelling (64th vs 61st percentile).

- Students who speak English at home and students who speak another language at home show a slight increase in Spelling from the Peel five-year average for these two groups.

Spelling Results by Type of Program

- French Immersion students scored significantly higher scores than Non-Immersion students in Spelling (72nd vs 61st percentile).

- French Immersion students show no variation in Spelling from the Peel five-year average. Non-Immersion students scored slightly higher in Spelling from the five-year average (61st vs 57th percentile).

MATHEMATICS

Mathematics Results for All Students

- The average score for Peel Grade 4 students in Math Concepts and Applications falls significantly above the mid-range of percentiles (65th percentile). This means that Peel Grade 4 performance in Concepts and Applications is higher than that of the national norm group.

- Peel scores in Total Math (59th percentile) fall slightly above the national norm group of Grade 4 students. Peel scores in Math Computations (51st percentile) fall within the national norm group

- The 2000-2001 Grade 4 scores in Math Concepts and Applications is significantly higher than the five-year average for this sub-test (65th vs 54th percentile). The Total Math score is slightly higher than the five-year average (59th vs 53rd percentile).

Mathematics Results by Gender

- There are no gender differences in Math Concepts and Applications, Math Computations, and Total Math scores.

- Male and female scores in Math Concepts and Applications show a significant increase from the Peel five-year averages for these two groups (males: 66th vs 55th percentile; females: 63rd vs 53rd percentile). Male and female scores in Total Math show a slight increase from the Peel five-year averages for these two groups (males: 60th vs 54th percentile; females: 59th vs 54th percentile).

Mathematics Results by Home Language

- There is no difference between students who speak English at home and students who speak another language at home in Math Concepts and Applications (65th vs 63rd percentile).

- Students who speak another language at home scored significantly higher in Math Computations (61st vs 49th percentile) and slightly higher in Total Math (64th vs 58th percentile) than those students who speak English at home.

- Students who speak English at home and students who speak another language at home show a significant increase from the Peel five-year average for these two groups in Math Concepts and Applications (English: 65th vs 55th percentile; Other language: 63rd vs 52nd percentile). Students who speak English at home and students who speak another language at home show a slight increase from the Peel five-year average for these two groups in Total Math (English: 58th vs 53rd percentile; Other language: 64th vs 58th percentile).

- Students who speak English at home and students who speak another language at home show no variation from the Peel five-year averages for these two groups in Math Computations.

Mathematics Results by Type of Program

- French Immersion students scored significantly higher than Non-Immersion students in Math Concepts and Applications (76th vs 64th percentile) and Total Math (67th vs 59th percentile).

- Non-Immersion students scored significantly higher than the Peel five-year average in Math Concepts and Applications (64th vs 55th percentile). Non-Immersion students scored slightly higher than the Peel five-year average in Total Math (59th vs 54th percentile).

- French Immersion and Non-Immersion students showed no variation from the Peel five-year averages for these two groups in Math Computations.

TABLE 3: Grade 4 Percentiles on the Canadian Achievement Test (CAT/2), 2000-2001

Five-year averages (1996-2000) are shown in parentheses.

CAT/2 SUB-TESTS ⇩	Percentiles *TOTAL GRADE 4 Current year & 5-year averages (N = 7,777)	Percentiles by GENDER		Percentiles by HOME LANGUAGE		Percentiles by TYPE of PROGRAM	
		Males (n = 3,927)	Females (n = 3,820)	English (n = 5,997)	Other (n = 1,756)	French Immersion (n = 475)	Non-Immersion (n = 7,275)
Vocabulary	**54** (49)	**53** (48)	**55** (51)	**56** (51)	**47** (41)	**67** (66)	**53** (49)
Reading Comprehension	**56** (51)	**53** (46)	**60** (57)	**58** (53)	**50** (44)	**69** (68)	**55** (51)
Total Reading†	**59** (54)	**57** (50)	**61** (58)	**61** (56)	**52** (45)	**73** (71)	**58** (52)
Spelling	**62** (57)	**58** (53)	**65** (62)	**61** (56)	**64** (60)	**72** (71)	**61** (57)
Math Concepts & Applications	**65** (54)	**66** (55)	**63** (53)	**65** (55)	**63** (52)	**76** (72)	**64** (55)
Math Computations	**51** (52)	**51** (50)	**52** (53)	**49** (49)	**61** (62)	**55** (56)	**51** (52)
Total Math✦	**59** (53)	**60** (54)	**59** (54)	**58** (53)	**64** (58)	**67** (65)	**59** (54)

* National average for the norm group = 50th percentile.

† Total Reading = average of the standard scores for Vocabulary and Reading Comprehension.

✦ Total Math = average of the standard scores for Concepts / Applications and Computations.

Grade 3 EQAO Student Questionnaire Results

In order to provide a context for the CAT/2 results, selected items from the 1999-2000 EQAO student questionnaire data are presented in this report. The Grade 3 students who completed the EQAO student questionnaire during the 1999-2000 school year are the same students as those tested on the CAT/2 in 2000-2001.

The Grade 3 EQAO student questionnaire inquired about attitudes, preferences, process skills and/or interactions with Reading, Writing, and Mathematics. The data presented in this report includes items relating to attitudes and perceptions about Reading, Writing, and Mathematics. The student survey was completed by 8,307 Grade 3 students in Peel.

Reading

Table 4 presents items from the student questionnaire data that relate to attitudes towards reading.

More female students (83%) enjoy reading relative to their male counterparts (70%). Sixty-five percent of female students and 59% of male students thought that they were good readers. Fifty-eight percent of female students and 49% of male students reported that they did reading that was not part of their work for school.

Table 4: Grade 3 EQAO Student READING Questionnaire Data

Questionnaire Item	% Response	
	Males	Females
I like to read	70%	83%
I am a good reader	59%	65%
I do reading that is not part of my work at school	49%	58%

Writing

Table 5 presents items from the student questionnaire data that relate to attitudes towards writing.

More female students (73%) enjoy writing relative to their male counterparts (59%). Fifty-seven percent of female students and 49% of male students thought that they were good writers. Fifty-five percent of female students and 44% of male students reported that they did writing that was not part of their work for school.

Table 5: Grade 3 EQAO Student WRITING Questionnaire Data

Questionnaire Item	% Response	
	Males	Females
I like to write	59%	73%
I am a good writer	49%	57%
I do writing that is not part of my work at school	44%	55%

Mathematics

Table 6 presents items from the student questionnaire data that relate to attitudes towards mathematics.

More male students (70%) enjoy mathematics relative to their female counterparts (62%). Sixty percent of male students and 44% of female students thought that they were good at mathematics. Fifty percent of male students and 49% of female students reported that they did mathematics that was not part of their work for school.

Table 6: Grade 3 EQAO Student MATHEMATICS Questionnaire Data

Questionnaire Item	% Response	
	Males	Females
I like mathematics	70%	62%
I am good at mathematics	60%	44%
I do mathematics that is not part of my work at school	50%	49%