

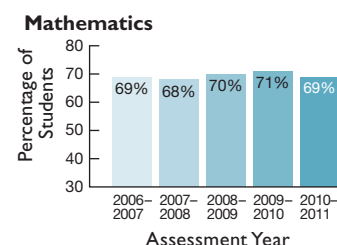
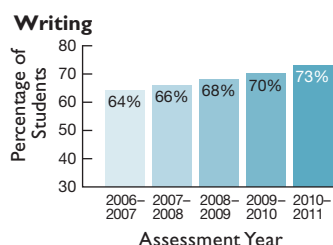
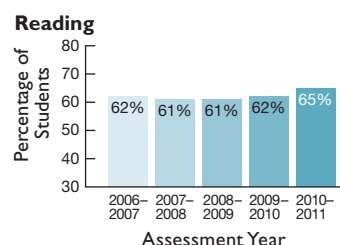
Summary of Results and Strategies for Teachers, 2010–2011

ASSESSMENTS OF READING, WRITING AND MATHEMATICS, PRIMARY AND JUNIOR DIVISIONS

PRIMARY DIVISION Comparison of Provincial Results Over Time

Percentage of All Grade 3 Students at or Above the Provincial Standard (Levels 3 and 4) Over Time

	2006–2007	2007–2008	2008–2009	2009–2010	2010–2011
NUMBER OF STUDENTS	# = 131 012	# = 128 660	# = 125 481	# = 127 789	# = 124 117
READING	62%	61%	61%	62%	65%
WRITING	64%	66%	68%	70%	73%
MATHEMATICS	69%	68%	70%	71%	69%



- There were 124 117 Grade 3 students at the time of the 2010–2011 assessment.
- The primary-division assessment is based on *The Ontario Curriculum, Grades 1–8: Language* (revised 2006) and *The Ontario Curriculum, Grades 1–8: Mathematics* (revised 2005).

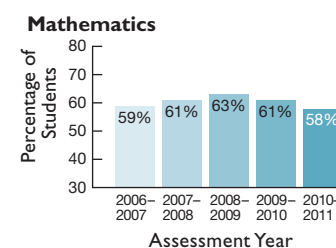
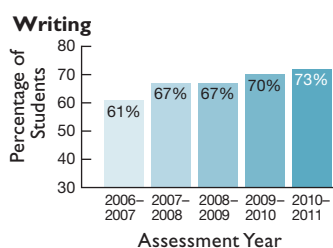
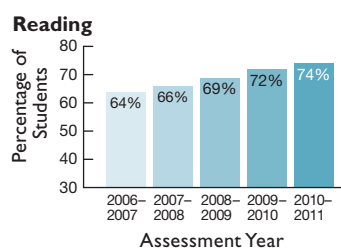
Observations

- Between 2006–2007 and 2009–2010, the percentage of students performing at or above the provincial standard in reading remained relatively stable (at 61% or 62%). In 2010–2011, the percentage increased by three percentage points (to 65%) from the previous year's.
- Over the past five years, the percentage of students at or above the provincial standard in writing has been steadily increasing (a nine-point increase, from 64% to 73%).
- Over the past five years, performance in mathematics has remained relatively stable at about 70%. In 2010–2011, the percentage of students at or above the standard in this subject decreased by two percentage points (to 69%) from the previous year's.

JUNIOR DIVISION Comparison of Provincial Results Over Time

Percentage of All Grade 6 Students at or Above the Provincial Standard (Levels 3 and 4) Over Time

	2006–2007	2007–2008	2008–2009	2009–2010	2010–2011
NUMBER OF STUDENTS	# = 145 901	# = 140 420	# = 136 076	# = 134 294	# = 132 308
READING	64%	66%	69%	72%	74%
WRITING	61%	67%	67%	70%	73%
MATHEMATICS	59%	61%	63%	61%	58%



- There were 132 308 Grade 6 students at the time of the 2010–2011 assessment.
- The junior-division assessment is based on *The Ontario Curriculum, Grades 1–8: Language* (revised 2006) and *The Ontario Curriculum, Grades 1–8: Mathematics* (revised 2005).

Observations

Over the past five years,

- the percentage of students performing at or above the provincial standard in reading has been steadily increasing, from 64% to 74% (a 10-percentage-point increase).
- the percentage of students at or above the provincial standard in writing has increased by 12 percentage points, from 61% to 73%.
- performance in mathematics has remained relatively stable. There has been a slight decrease in the percentage of students achieving the standard in each of the past two years. In 2010–2011, the percentage of students at or above the standard in this subject decreased by three percentage points (to 58%) from the previous year's.

TRACKING STUDENT PROGRESS THROUGH PROVINCIAL ASSESSMENTS

EQAO now regularly tracks the achievement of individual students as they progress from one provincial assessment to the next. This document compares the junior-division assessment results of students who were in Grade 6 in 2011 with their results on the primary-division assessment when they were in Grade 3 in 2008. It also compares students' Grade 9 mathematics assessment results in 2011 with their math results on the provincial assessments when they were in Grade 3 in 2005 and Grade 6 in 2008.

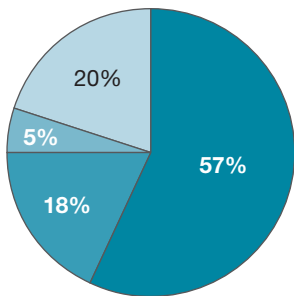
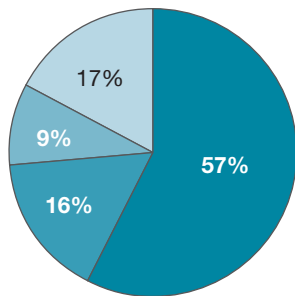
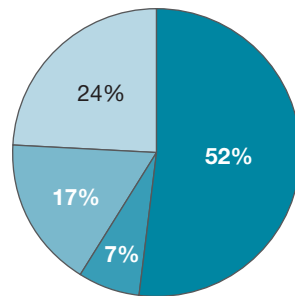
Throughout this document, the progress of students as they moved from Grade 3 to Grade 6 has been illustrated by pie charts that are divided into four categories to reflect the four possible ways students can progress from one assessment to the next:

- **Maintained Standard**—Met the provincial standard in Grade 3 and Grade 6
- **Rose to Standard**—Did not meet the standard in Grade 3 but met it in Grade 6
- **Dropped from Standard**—Met the standard in Grade 3 but did not meet it in Grade 6
- **Never Met Standard**—Did not meet the standard in Grade 3 and also did not in Grade 6

Progress in Achievement from Grade 3 in 2008 to Grade 6 in 2011

There were 132 308 Grade 6 students in 2011. The pie charts below show how students performed on the 2011 assessments compared to their assessment results in 2008. The percentages are based on all tracked students in the cohort, including those who participated, those who were exempted and those who provided no work to be scored.

Note: Student results in the analyses throughout this document have been linked using the students' names and their Ontario Education Numbers (OENs). Not all students could be matched. Reasons include the student's recent arrival in Ontario (i.e., he or she was not in the school system for the previous assessment), misspelled names or inaccurate OENs. Numbers have been rounded off to the nearest whole percent throughout this document.

READING From Grade 3 in 2008 to Grade 6 in 2011	WRITING From Grade 3 in 2008 to Grade 6 in 2011	MATHEMATICS From Grade 3 in 2008 to Grade 6 in 2011
		
■ Maintained Standard ■ Rose to Standard ■ Dropped From Standard ■ Never Met Standard		
The reading results for the 118 305 matched students are as follows: ■ 57% (67 269) met the provincial standard in Grade 3 and Grade 6; ■ 18% (21 209) did not meet the standard in Grade 3 but met it in Grade 6; ■ 5% (6142) met the standard in Grade 3 but did not meet it in Grade 6 and ■ 20% (23 685) did not meet the standard in Grade 3 and also did not in Grade 6.	The writing results for the 118 290 matched students are as follows: ■ 57% (67 971) met the provincial standard in Grade 3 and Grade 6; ■ 16% (18 908) did not meet the standard in Grade 3 but met it in Grade 6; ■ 9% (10 797) met the standard in Grade 3 but did not meet it in Grade 6 and ■ 17% (20 614) did not meet the standard in Grade 3 and also did not in Grade 6.	The mathematics results for the 121 667 matched students are as follows: ■ 52% (62 959) met the provincial standard in Grade 3 and Grade 6; ■ 7% (8582) did not meet the standard in Grade 3 but met it in Grade 6; ■ 17% (20 505) met the standard in Grade 3 but did not meet it in Grade 6 and ■ 24% (29 621) did not meet the standard in Grade 3 and also did not in Grade 6.

STRATEGIES FOR TEACHERS: PRIMARY DIVISION

The following observations and suggested strategies for improvement are meant to assist educators in helping students develop and demonstrate their knowledge and skills in reading, writing and mathematics. The suggestions are based on an analysis of students' performance on the 2010–2011 Assessment of Reading, Writing and Mathematics, Primary Division, as well as on those of the previous four school years (2006–2007 to 2009–2010), and on feedback from teachers who scored the 2010–2011 assessment.

The released 2010–2011 assessment booklets can be accessed on the EQAO Web site, www.eqao.com.

For more information on the skills assessed and the kinds of questions used to measure them, see the primary-division *Framework*, on the EQAO Web site. For more information on the terms in bold print, refer to the list of resources at the end of this section.

READING

Through a combination of multiple-choice and open-response questions about narrative, informational, poetic and graphic reading texts, the primary EQAO assessment focuses on three reading skills

Reading Skill 1: understanding explicitly stated information and ideas

Reading Skill 2: understanding implicitly stated information and ideas

Reading Skill 3: making connections between information and ideas in a reading selection and personal knowledge and experience

Observations, Strategies and Resources

Primary Division: Reading	Observations	Strategies for Improvement
Reading Skills	Students performed equally well on multiple-choice questions measuring each of the three reading skills. Overall, as in past years, students performed better on multiple-choice than on open-response questions when demonstrating their reading comprehension. Students performed best on the open-response question measuring Reading Skill 1 (understanding explicitly stated information and ideas). Students performed about the same on open-response questions measuring Reading Skill 2 (understanding implicitly stated information in a reading selection) and Reading Skill 3 (making connections between the reading selection and their own knowledge and experience). Over several years, scorers have continued to make two observations about performance on open-response questions. First, a Code 30 or 40 demonstrated reading comprehension by using key words from the question, answering all aspects of the question, providing specific information from the text and explaining its relevance. Additionally, scorers have noted mixed results with the use of formulas to organize and develop answers. Formula components that prompt students to use words from the question and respond to it by providing support from the text are helpful. Formula components that prompt students to extend their understanding of a text are more problematic. Answers earning Code 30 or 40 make connections to the text, rather than extending away from it, or giving irrelevant information.	Share learning goals and co-construct success criteria (e.g., similar to those in EQAO's scoring guides for reading responses) with students at the outset of learning. Collaborate with teachers to deconstruct the scoring rubrics and anchors for Level 30 and 40 responses on the EQAO Web site and share ideas for descriptive feedback. Use this information to provide precise guidance to students about what they are doing well, what needs improvement, what steps they can take to improve their level of understanding and the support from the text that is required to score a Code 30 or 40. Continue to model how to ask questions of text, how to make inferences and how to give evidence from text. Demonstrate how students use their own ideas by thinking about the content of the text and by giving an answer to the question. Have students practise going back to the text to find relevant examples and evidence that supports or proves their answer. Encourage students to reread questions carefully and focus on key words to ensure they answer all parts of the question. Teach students the differences in expectations among question instructions (e.g., explain how, explain why, explain whether, describe, compare) and provide practice responding to each question type. To help them achieve deeper understanding, teach students how to make connections as they read. Model

Primary Division: Reading	Observations	Strategies for Improvement
Reading Skills (continued)		and provide think-alouds that show how to make relevant connections by accessing prior knowledge about a subject that helps the student understand and respond to the text. Show students how to use their prior knowledge to answer questions such as “What do I know about what a ‘perfect day’ would be and how is this evident in the text?” (Section A: Q. 5) and “What is an ‘active, living community’ and how is this evident in the text?” (Section B: Q.19).
Overall Reading Expectations from the Curriculum	As in the past few years, students performed best on questions measuring Overall Reading Expectation 3 (use knowledge of words and cueing systems to read fluently), which is measured by multiple-choice questions only. Some students who selected incorrect answers for this expectation seemed not to return to the reading selection to check the meaning. Students performed less well on questions measuring Overall Reading Expectation 1 (read and demonstrate an understanding of a variety of literary, graphic and informational texts, using a range of strategies to construct meaning) and on questions measuring Overall Reading Expectation 2 (recognize a variety of text forms, text features and stylistic elements and demonstrate understanding of how they help communicate meaning).	Engage students in deep thinking to construct meaning in order to develop the skills required by Overall Reading Expectation 1. Engage students in meaningful conversations about texts to support the development of higher-order thinking skills. Use probes and follow-ups like “How do you know?” “Why?” “Can you explain your thinking further?” “What other way might there be to think about this?” to encourage students to “unpack their thinking” and describe how they have arrived at a particular answer. Co-construct charts to have students document their thinking process. Continue to provide opportunities for vocabulary development by having students use context clues and make inferences about unfamiliar vocabulary as it occurs in texts in all subject areas. In shared reading, explore the denotations (literal meanings) and connotations (implied meanings) of words. Reflect on the connections between the explicit and implied meanings of words and how doing so helps readers make inferences. Provide students with multiple opportunities to practise the skills required by Overall Reading Expectation 2 and the associated specific expectations (e.g., text types, text forms, text features) and give students opportunities to explain how these relate to the meaning of the text. Ensure that students relate the general meaning of text features to specific texts and understand how the text feature helps readers to understand the text.

Primary Division: Reading	Observations	Strategies for Improvement
Text Types	Students performed best on questions relating to the short narrative (“Snowshoe Adventure”) and the long narrative (“Museum Detectives”). Students had the most difficulty with questions relating to the poem (“Bad Mood Blues”) and the graphic text (“Animal Exercises”).	Use different types of texts on the same topic to illustrate how the forms, features and stylistic elements of fiction and informational texts differ. Choose non-fiction texts that require background knowledge from a variety of curriculum areas, so students need to activate prior knowledge to understand vocabulary and make connections and inferences. During shared reading, examine graphic features in information texts (diagrams, pictures, charts). Have students practise reading the different components and explain how these components communicate meaning. Provide students with opportunities to practise writing simple graphic texts. Help students recognize organizational patterns and explain how these patterns help readers understand the text. Have students practise identifying the main idea and additional elements of texts. Use shared reading and new media (e.g., hyperlinks, digital poems) to engage students in poetry. Have students collect and exchange favourite poems that lend themselves to making judgments and drawing conclusions.
Gender	For all reading selections, female students continued to outperform male students on multiple-choice and open-response questions, although the difference in their performance was not very large. The smallest gap occurred on questions relating to the information text (“Underwater Apartment”). The largest gap occurred on questions relating to the graphic text (“Animal Exercises”).	Continue to help male students develop their literacy skills in all subject areas by explicitly teaching the processes that effective readers use. Teach all students to use reciprocal teaching to focus on the important components of the reading process and to monitor their reading. Model how to add relevant details when responding to questions. Examine EQAO data to pinpoint gender gaps in skill development and take action with strategies that work, such as using common language and resources throughout the grades. Adopt practices identified in <i>Towards an Understanding of Gender Differences in Literacy Achievement</i>, an EQAO research study examining strategies employed by schools with small gender gaps in assessment results, as follows: set high academic and behavioural expectations regardless of gender or background; develop consistent standards and understanding of effective literacy instruction among teachers of all subjects, informed by practice and research; foster positive attitudes toward reading and use male role models to promote literacy as part of

Primary Division: Reading	Observations	Strategies for Improvement
Gender (continued)		the school culture. Review recent Ministry “ Support for Boys’ Literacy ” resources for strategies that improve the literacy skills of males.
English Language Learners	The pattern of relative strengths for English language learners was similar to that of the general population on questions measuring all three reading skills and Overall Reading Expectations 1 and 2. However, as in the past two years, English language learners have experienced greater difficulty with questions measuring Overall Reading Expectation 3 (use knowledge of words and cueing systems to read fluently). The largest gap between them and the general population was also on questions measuring this expectation. They performed similarly to the general population on all text types, with highest scores on the narratives (“Snowshoe Adventure” and “Museum Detectives”) and lowest scores on the poem (“Bad Mood Blues”) and graphic text (“Animal Exercises”).	Use instructional supports for English language learners such as purposeful and accountable talk in small groups, and directly teach word knowledge, text forms and text features. Through modelled and shared reading, demonstrate how text forms and features help communicate meaning. Continue to incorporate visual tools (e.g., visual anchor charts) and scaffolds (e.g., paragraph frames) in all subject areas. Provide levelled texts and resources at a variety of levels on the same topic so that all students can access knowledge and information and build proficiency. Encourage students to read and write in their own language.
Students with Special Education Needs (Excluding Gifted)	As in previous years, students with special education needs did not perform as well as the general population, although their pattern of relative strengths was similar to that of the general population. The largest gap between students with special education needs and the general population was on Overall Expectation 3. Students with special education needs performed best on questions relating to the short narrative text (“Snowshoe Adventure”). They had more difficulty on questions relating to the poem (“Bad Mood Blues”) and the graphic (“Animal Exercises”) and information (“Underwater Apartment”) texts.	Continue to encourage students with special education needs to use assistive technologies for idea generation, organization and completion of writing tasks whenever possible. Use a tiered approach to teaching the strategies of reading comprehension, along with precise and intensive instruction. Differentiate instruction to optimize student reading comprehension through, for example, focused lessons in small groups, graphic organizers and guided practice.

WRITING

Through a combination of multiple-choice questions, short-writing tasks and long-writing tasks, the primary-division assessment focuses on the following writing skills:

Topic Development

- Content—developing a main idea with sufficient supporting details
- Organization—organizing information and ideas in a coherent manner

Conventions—use of spelling, grammar, punctuation

Observations, Strategies and Resources

Primary Division: Writing	Observations	Strategies for Improvement
Writing Skills	For the past five years, students have performed better on questions measuring use of conventions than on questions measuring topic development. For topic development, students continue to perform better on multiple-choice questions than on short- and long-writing tasks. This year, they performed better on the long-writing task than on the short-writing tasks. Students performed about the same on both short-writing tasks. For conventions, students performed equally well on the short- and long-writing tasks. Scorers reported that written work that used effective opening and/or concluding sentences and that linked ideas in a logical order usually received a Code 30 or 40. For example, on the long-writing task, when asked to write about where a missing school bag has gone and what it does (“Backpack Adventure”), students who only listed the places where the backpack went or where the characters looked for it received a lower score. Those who provided relevant and specific supporting details generally received higher scores.	Share EQAO rubrics and anchors with students to help them understand their learning goals and success criteria. Gather evidence of student needs by observing and assessing students. Then provide whole-class mini-lessons on a specific skill or topic, followed by guided practice to apply learning. Use a personalized conference to provide criterion-based and reader-based feedback while students are in the process of writing drafts, so they can try out the suggestions. Increase opportunities for students to explore their interests, lives and world beyond the classroom through non-fiction writing. Model how to express an idea and then support it with specific details, and have students work in small groups, keeping in mind their writing’s purpose (e.g., to explain, persuade, describe or inform) and the audience it is addressing. Have the students share their work and discuss what makes it effective. Model careful reading of the EQAO writing prompts to identify the topic, written form, purpose and audience the prompts specify. Provide opportunities for students to become familiar with the vocabulary of the assessment booklets on the EQAO Web site, so they gain confidence in their ability to write the assessment. Continue to provide opportunities for students to develop endurance for longer writing tasks, and include opportunities to practise responding to on-demand writing prompts.

Primary Division: Writing	Observations	Strategies for Improvement
Overall Writing Expectations from the Curriculum	Overall, students performed well on questions measuring Overall Writing Expectation 3 (apply knowledge of language conventions and present written work effectively). Students performed equally well on Overall Writing Expectation 1 (develop and organize content) and Overall Writing Expectation 2 (use knowledge of form and style).	As part of a networked learning community, use teacher moderation, so that all teachers use consistent criteria. Prior to the moderation sessions, give common writing tasks to students with agreed-upon sets of performance criteria. Use the outcome of the sessions to plan next steps. Continue to introduce students to the written text forms required by the curriculum and model how to organize writing in each form. Explicitly share, discuss and chart mentor texts (models of good writing). Prompt students to incorporate the various elements of writing into their written work, with a particular focus on ideas and organization. Model how to focus on a few ideas and specific details relevant to the text form, purpose and audience required by the prompt rather than listing many underdeveloped ideas and details. Encourage the use of a few well-chosen graphic organizers and use the same graphic organizers for reading and writing, so students can see the similarities between the two (e.g., between deconstructing a story as a reader and constructing a story as a writer). Start with organizers as a scaffold and help students develop their use beyond formulaic responses.
Gender	As in previous years, female students outperformed male students on all multiple-choice writing questions and short- and long-writing tasks. The gap in favour of girls for topic development for both short- and long-writing tasks has slightly decreased in the past four years. Each group's overall performance on the long-writing task has improved since 2008–2009.	Connect writing in multiple subject areas through the use of an engaging integrated curriculum. Use music and art to generate ideas for writing. Encourage students to interpret what they are hearing and seeing in words and phrases that will help convey their meaning as specifically as possible. Use writing frames (outlines or templates that give students a structure for communicating what they want to say) as students begin a writing task. Encourage students to move gradually beyond using them mechanically to organizing their writing organically. Provide students with opportunities to learn how writing can be organized by giving them phrases and sentences to sort and arrange into longer texts. Schedule peer feedback so male students have an opportunity to exchange their draft writing and discuss it with a peer. Encourage the peers to use the “two stars and a wish framework” for their feedback. Have students use a revising and editing checklist to help them improve the clarity of content, correctly use writing conventions and track their progress in developing their writing skills over time.

Primary Division: Writing	Observations	Strategies for Improvement
Gender (continued)		Tackle unfamiliar vocabulary by focusing on root words, synonyms and antonyms. During shared reading of a text that contains descriptive language, discuss and chart “powerful words.” Continue to use classroom practices proven by teacher inquiry projects to improve boys’ literacy achievement, such as social interaction before writing.
English Language Learners	As was true for the general population, English language learners performed better on Overall Writing Expectation 3 than on Overall Writing Expectations 1 and 2 on both the long- and the short-writing tasks. Similarly, English language learners performed better on multiple-choice items measuring topic development than on short- and long-writing tasks relating to topic development. The percentage of English language learners performing at or above the provincial standard in writing has continued to increase over the past five years, and the gap between their results and those of the general population has decreased. More specifically, for topic development in the long-writing task, performance has improved significantly since 2008. For use of conventions, performance on the long-writing task has also improved slightly over time. The gap between English language learners and the general population for use of conventions on short- and long-writing tasks has been minimal between 2008 and 2011. Similarly to the general population, on the use of conventions, English language learners performed better on the short- and long-writing tasks than on multiple-choice questions.	Actively involve English language learners in learning about how words work. During revision, focus on having students practise sentence fluency to understand how syntax works and to become more effective writers. Engage English language learners in storytelling, as talking about their writing will help students rehearse and revise stories. Share examples of descriptive paragraphs so students see how they are organized. Give students sentences and ask them to arrange the sentences into groups comprising an idea and supporting details. Have students write group stories by working together to organize their ideas and then contributing sentences individually.

Primary Division: Writing	Observations	Strategies for Improvement
Students with Special Education Needs (Excluding Gifted)	Although the percentage of students with special education needs performing at or above the provincial standard in writing has increased over the past five years, these students have not performed as well as the general population. Their pattern of relative strengths and weaknesses continues to be similar to that of the general population. As was true for the general population, students with special education needs performed better on multiple-choice questions measuring Writing Skill 1 and Writing Skill 2 than on questions measuring Writing Skill 3. Their results on all three skills were lower than those of the general population. Their overall performance in topic development on the long-writing task has improved significantly between 2009 and 2011. As was true for the general population, students with special education needs performed better on the long-writing task than on the short-writing tasks for topic development. Also, they performed better on the use of conventions than on topic development on both the short- and the long-writing tasks.	Continue to encourage students with special education needs to use assistive technologies for idea generation, organization and completion of writing tasks whenever possible. Differentiate instruction to optimize student writing through, for example, the use of graphic organizers, guided practice and focused lessons in small groups. Use a writer's workshop approach so students write with support. Through Universal Design for Learning, provide multiple and flexible methods of presentation to give students with diverse learning styles various ways of acquiring information and knowledge and alternatives for demonstrating what they have learned. Use word sorts in the whole group and with small groups of students. Engage in word study games using an interactive whiteboard. Follow this with a cloze activity, in which students insert words from a list into given sentences. Use storytelling, including the oral rehearsal of ideas and role-play, to promote writing fluency and proficiency, vocabulary development and an understanding of narrative elements.

MATHEMATICS

Through a combination of multiple-choice and open-response questions based on the *Ontario Curriculum* expectations from the strands Number Sense and Numeration, Measurement, Geometry and Spatial Sense, Patterning and Algebra, and Data Management and Probability, the primary-division EQAO assessment focuses on the following cognitive skills:

Knowledge and Understanding—facility with subject-specific content (knowledge) and comprehension of its meaning and significance (understanding)

Application—ability to select the appropriate “tool” or get the necessary information and apply it effectively to solve the problem

Thinking—ability to select and sequence a variety of tools to solve a problem and demonstrate a critical-thinking process

Observations, Strategies and Resources

Primary Division: Mathematics	Observations	Strategies for Improvement
Number Sense and Numeration	As in 2010, students performed best on questions from this strand. Scorers of the open-response question that required students to add and subtract three digit numbers noted that many students solved the first part of the problem but did not complete the solution.	Provide students with the opportunity to solve multi-step problems and check the reasonableness of their answers. Model complete solution processes. Continue to teach mental math strategies.
Measurement	Students struggled with the questions requiring them to measure an area on a grid using full and half grid squares.	Continue to reinforce the difference between perimeter and area by teaching them simultaneously. Provide opportunities for students to identify the area of a shape on grid paper when part of the shape is made up of half grid squares.
Geometry and Spatial Sense	In 2011, students performed least well on questions from this and the Data Management and Probability strand. Scorers of the open-response question that required students to identify and compare parallelograms noted that students struggled to use geometric properties in their explanations. Scorers of the open-response question that required students to describe movement from one location to another using a grid map noted that some students drew paths through boxes rather than along the gridlines, as specified in the instructions.	Continue to promote written communications and model the use of geometric language. Provide students with the opportunity to engage in dialogue with each other and evaluate solutions involving shapes and their properties. Provide opportunities for students to describe movement along gridlines.
Patterning and Algebra	Scorers of the open-response question that required students to solve a problem by extending a growing pattern noted that students who were successful organized their work using tables, T-charts or number lines.	Provide opportunities for students to skip count from numbers other than zero.

Primary Division: Mathematics	Observations	Strategies for Improvement
Data Management and Probability	In 2011, students performed least well on questions from this and the Geometry and Spatial Sense strand. Scorers of the open-response question that required students to solve a problem by reading and interpreting data displayed on a bar graph noted that most students could successfully label a scale and read data on the graph.	Continue to provide students with opportunities to investigate the relationship between equally likely outcomes and fairness in a game.
Cognitive Skill	Students performed equally well on questions mapped to the cognitive skills Knowledge and Understanding and Application and least well on those mapped to the cognitive skill Thinking. Students continued to have difficulty with multi-step problems.	Introduce concepts and procedures through problem-solving. Employ interactive classroom strategies (e.g., Bansho, shared mathematics) to engage all students as problem solvers. Reinforce prior mathematical knowledge when introducing new concepts and procedures. Model the appropriate use of concrete materials and manipulatives to visualize concepts and solve problems, and provide these resources for students to use regularly. Continue to model appropriate problem-solving strategies and use the appropriate tools (e.g., graphic organizers). See the Four-Step Problem-Solving Model. Model when it is appropriate to use a diagram, an explanation or calculations to solve a problem, as all three are not always required in a solution. Provide calculators to enable students to investigate when solving problems and to check the reasonableness of answer choices.
Students with Special Education Needs (Excluding Gifted)	Students with special education needs continued to perform consistently more than 10 percentage points below the general Grade 3 population in all strands, cognitive skills and question types.	Continue to differentiate instruction using the Universal Design for Learning for all students, but particularly for students with special education needs. Review the allowed accommodations listed in EQAO's <i>Guide for Accommodations, Special Provisions and Exemptions</i>, assign them to students individually and incorporate them into the student's regular program.

Primary Division: Mathematics	Observations	Strategies for Improvement
English Language Learners	Overall, English language learners' performance was slightly below the general population's in all cognitive skills, question types and strands. The achievement trends for English language learners are the same as those for the general population for all strands, cognitive skills and question types.	Continue to provide opportunities for interactive problem solving and discussion of a variety of solutions. Emphasize mathematical terminology while teaching concepts.
Gender	Overall, in 2011, male and female students performed equally well on multiple-choice and open-response questions across all strands and skills.	Provide collaborative learning opportunities in clusters or pairs, using different strategies (e.g., think-pair-share). Be aware of gender differences when planning inclusive instruction.

Primary Division: Reading and Writing

List of Resources

If you are reading the version of this document found on the EQAO Web site, www.eqao.com, please use the hyperlinks to the listed resources.

Main resources

Literacy and Numeracy Secretariat. *Literacy Series: Module 1. Comprehending in action: Inferring* [PowerPoint presentation]. Available at <http://resources.curriculum.org/LNS/coaching/profresources.shtml#literacy>

- Higher-order thinking
- Making inferences

Literacy and Numeracy Secretariat. (2007, May). *What Works? Research into Practice: Secretariat Special Edition 1. Learning blocks for literacy and numeracy*. Available at http://resources.curriculum.org/LNS/coaching/files/pdf/WhatWorks_May07.pdf

- Differentiating
- Making inferences

Literacy and Numeracy Secretariat. (2010, September). *What works? Research into Practice: Research Monograph 27. Word study instruction: Enhancing reading comprehension*. Available at http://www.edu.gov.on.ca/eng/literacynumeracy/inspire/research/WW_Word_Study.pdf

- Connotation
- Denotation
- Powerful words
- Word study

Literacy and Numeracy Secretariat. (2010, October). *What works? Research into Practice: Research Monograph 29. Improving student writing: Using feedback as a tool*. Available at http://www.edu.gov.on.ca/eng/literacynumeracy/inspire/research/WW_Improving_Student_Writing.pdf

- Conferences
- Criterion-based and reader-based feedback
- Peer feedback
- “Two stars and a wish” framework

Ministry of Education of Ontario. (2003). *A guide to effective instruction in reading, kindergarten to Grade 3*. Available at http://www.eworkshop.on.ca/edu/resources/guides/Reading_K_3_English.pdf

- Graphic features in information texts: Sample lesson 4, pages 115–132
- Graphic organizers: Chapter 10
- Higher-order thinking skills: pages 8.14–8.15
- Levelled texts: page 6.5 (R)
- Text features: pages 5.26–5.31
- Text types: pages 1.20–1.21
- Think-alouds: pages 4 to 6
- Vocabulary development: pages 3.29 (“Go Charts for Picture Walk”) and 8.11–8.13

Ministry of Education of Ontario. (2005). *A guide to effective instruction in writing, kindergarten to Grade 3*. (2005). Available at http://www.eworkshop.on.ca/edu/resources/guides/Guide_Writing_%20K_3.pdf

- Effective beginnings: pages 5.6–5.8
- Elements of writing: pages 1.14–1.20 and appendices
- Graphic organizers: appendices
- Ideas: throughout
- Mini lessons: throughout
- Organization: throughout
- Revising and editing checklists: Appendix 6–4: Independent writing, revising and editing checklist.
- Revision: pages 1.8, 1.13, Appendices 6–4, 6–7
- Writer’s workshop: throughout

Primary Division: Reading and Writing

List of Resources (continued)

Ministry of Education of Ontario. (2008). *A guide to effective literacy instruction, Grades 4–6: Volume 5. Reading*. Available at http://www.eworkshop.on.ca/edu/resources/guides/Guide_Lit_456_Vol_5_Reading.pdf

- Activating prior knowledge: page 88
- Locating information: pages 32–39 (Sample Lesson 2.1: Identifying the main idea and the author's purpose)
- Shared-, guided- and independent-reading texts: pages 60–85

Ministry of Education of Ontario. (2008). *A guide to effective literacy instruction, Grades 4–6: Volume 6. Writing*. Available at http://www.eworkshop.on.ca/edu/resources/guides/Guide_Lit_456_Vol_6_Writing.pdf

- Graphic writing: page 51
- Graphic organizers: page 50
- Poetry: pages 111–114
- Conferencing: pages 25–27
- Mentor texts: page 42
- Revision: pages 39–42
- Text forms: pages 11–13

Other resources

Assistive technologies

- Chapter 10 of Ministry of Education of Ontario. (2005). *Education for all: The report of the expert panel on literacy and numeracy instruction for students with special education needs, kindergarten to Grade 6*. Available at <http://www.edu.gov.on.ca/eng/document/reports/speced/panel/speced.pdf>

Conferencing

- Ministry of Education of Ontario. (2005). Appendix 6-3: Sample writing conference record. *A guide to effective instruction in writing, kindergarten to Grade 3*. Available at http://www.eworkshop.on.ca/edu/pdf/Appendices_writing.pdf

Context clues

- Literacy and Numeracy Secretariat. (2009, October). *Capacity Building Series: Secretariat Special Edition 11. A world of words: Enhancing vocabulary development for English language learners*. Available at http://www.edu.gov.on.ca/eng/literacynumeracy/inspire/research/world_of_words.pdf

Deep thinking

- Literacy and Numeracy Secretariat. (2007, November 29). *Critical literacy. Webcasts for Educators*. Available at <http://resources.curriculum.org/secretariat/november29.shtml>

Descriptive feedback

- Literacy and Numeracy Secretariat. (2010, October 15). *Developing inquiring minds: Teachers demonstrate effective descriptive feedback [Webcasts]*. Available at <http://resources.curriculum.org/secretariat/inquiring/feedback.shtml>
- Ministry of Education of Ontario. Descriptive feedback. AER GAINS: <http://www.edugains.ca/newsite/aer2/aervideo/descriptivefeedback.html>
- Ministry of Education of Ontario. Descriptive feedback. Viewing guide for assessment for learning video series: <http://www.edugains.ca/resourcesAER/VideoLibrary/Feedback/ViewingGuideFeedbackAFLVideoSeries.pdf>

Differentiated instruction

- Ministry of Education of Ontario. (June 2009). *Learning for all, K–12 [Draft]*. Available at http://www.ontariodirectors.ca/L4AII/L4A_en.html
- Literacy and Numeracy Secretariat. (2008, May 2). *Differentiated instruction: Continuing the conversation. Webcasts for Educators*. Available at <http://resources.curriculum.org/secretariat/march29.shtml>
- pages 14–15 of Ministry of Education of Ontario. (2005). *Education for all: The report of the expert panel on literacy and numeracy instruction for students with special education needs*. Available at <http://www.edu.gov.on.ca/eng/document/reports/speced/panel/speced.pdf>
- Literacy and Numeracy Secretariat. (2006, September). *Building upon our successes. Webcasts for Educators*. Available at <http://resources.curriculum.org/secretariat/september28.shtml>

Primary Division: Reading and Writing

List of Resources (continued)

English language learners

- Ministry of Education of Ontario. (2005). *Many roots, many voices: Supporting English language learners in every classroom*. Available at <http://www.edu.gov.on.ca/eng/document/manyroots/manyroots.pdf>
- Literacy and Numeracy Secretariat. (2006, September). *Teaching and learning in multilingual Ontario. Webcasts for Educators*. Available at <http://resources.curriculum.org/secretariat/december7.shtml>
- Literacy and Numeracy Secretariat. (2009, March). *Capacity Building Series: Special Edition 8. ELL voices in the classroom*. Available at http://www.edu.gov.on.ca/eng/literacynumeracy/inspire/research/ELL_Voices09.pdf

Gathering evidence

- Literacy and Numeracy Secretariat. (2007, September). *Capacity Building Series: Secretariat Special Edition. Teacher moderation: Collaborative assessment of student work*. Available at http://www.edu.gov.on.ca/eng/literacynumeracy/inspire/research/Teacher_Moderation.pdf
- Kozlow, M. (2008, Fall). *Exploring the many layers of EQAO assessment data: Peeling the onion. EQAO Connects*. Available at <http://www.eqao.com/eMagazine/2008/10/eMagazine.aspx?Lang=E>

Graphic organizers

- Ministry of Education of Ontario. (2005). *Appendices. A guide to effective instruction in writing, kindergarten to Grade 3*. Available at http://www.eworkshop.on.ca/edu/pdf/Appendices_writing.pdf

Higher-order thinking

- Literacy and Numeracy Secretariat. (2007). *Literacy Series: Module 3. Comprehending in Action: Connecting reading and writing for higher-order thinking* [PowerPoint presentation]. Available at <http://resources.curriculum.org/LNS/coaching/profresources.shtml>
- Literacy and Numeracy Secretariat. (2009, April 21). *Quality teaching: It's intentional. Webcasts for Educators*. Available at <http://www.curriculum.org/secretariat/april21.shtml>

Instructional supports

- Literacy and Numeracy Secretariat. *Supporting English language learners, Grades 1 to 8: Video and print resources*. Available at <http://www.curriculum.org/LNS/ELL/index.shtml>
- Literacy and Numeracy Secretariat. (2009, March). *Capacity Building Series: Secretariat Special Edition 8, ELL voices in the classroom*. Available at http://www.edu.gov.on.ca/eng/literacynumeracy/inspire/research/ELL_Voices09.pdf

Integrated curriculum

- Literacy and Numeracy Secretariat. (2010, September). *Capacity Building Series: Secretariat Special Edition 14. Integrated learning in the classroom*. Available at http://www.edu.gov.on.ca/eng/literacynumeracy/inspire/research/CBS_integrated_learning.pdf

Learning goals

- Ministry of Education of Ontario. *Learning goals and success criteria video library*: <http://www.edugains.ca/newsite/aer2/aervideo/learninggoals.html>

Making inferences

- Literacy and Numeracy Secretariat. (2007, May). *What Works? Research into Practice: Secretariat Special Edition 1. Learning blocks for literacy and numeracy*. Available at http://resources.curriculum.org/LNS/coaching/files/pdf/WhatWorks_May07.pdf
- Literacy and Numeracy Secretariat. *Literacy Series: Module 1. Comprehending in action: Inferring* [PowerPoint presentation]. Available at <http://resources.curriculum.org/LNS/coaching/profresources.shtml#literacy>

Male students

- pages 17–21 and 37–38 of Ministry of Education of Ontario. (2004). *Me read? No way! A practical guide to improving boys' literacy skills*. Available at <http://www.edu.gov.on.ca/eng/document/brochure/meread/meread.pdf>
- Ministry of Education of Ontario Web site for other resources on boys' literacy: <http://www.edu.gov.on.ca/eng/curriculum/boysliteracy.html>
- Literacy and Numeracy Secretariat. (2009, October). *Engaging boys: Powerful possibilities for all learners* [Webcast]. Available at <http://resources.curriculum.org/secretariat/engaging/index.shtml>

Primary Division: Reading and Writing

List of Resources (continued)

- Literacy and Numeracy Secretariat. (2008, April). *What Works? Research into Practice: Research Monograph 12. Boys' underachievement: Which boys are we talking about?* Available at <http://www.edu.gov.on.ca/eng/literacynumeracy/inspire/research/Martino.pdf>
- The “**Supports for Boys' Literacy**” resources: <http://edugains.ca/newsite/literacy2/supportsboyliteracy.html>

Meaningful conversations

- Literacy and Numeracy Secretariat. (2011, April). *Capacity Building Series: Secretariat Special Edition 18. Grand conversations in primary classroom.* Available at http://www.edu.gov.on.ca/eng/literacynumeracy/inspire/research/CBS_Grand_Conversations.pdf

Mentor texts

- Literacy and Numeracy Secretariat. (2009, October). *Engaging boys: Powerful possibilities for all learners* [Webcasts]. Available at <http://www.curriculum.org/secretariat/engaging/multimodal.shtml>
- Ministry of Education of Ontario. Online teaching resources available at <http://www.eworkshop.on.ca/edu/core.cfm>

Non-fiction

- pages 5.26–5.31 of Ministry of Education of Ontario. (2003). *A guide to effective instruction in reading, kindergarten to Grade 3.* Available at http://www.eworkshop.on.ca/edu/resources/guides/Reading_K_3_English.pdf
- Literacy and Numeracy Secretariat. (2008, May 2). High-yield strategies to improve student learning. *Webcasts for Educators.* Available at <http://resources.curriculum.org/secretariat/may2.shtml>
- Literacy and Numeracy Secretariat. (2009, April). *Capacity Building Series: Secretariat Special Edition 9. Critical literacy.* Available at http://www.edu.gov.on.ca/eng/literacynumeracy/inspire/research/Critical_Literacy.pdf

Networked learning communities

- Dack, L., Earl, L., & Katz, S. (2009, Spring). Networked learning communities: Fostering learning for teachers and the students. *Principal Connections 12*(3). Available at <http://resources.curriculum.org/secretariat/criticalpathways/files/TLCPKatzEarl.pdf>

Organizational patterns

- pages 4–5 of Literacy and Numeracy Secretariat. (2008, March). *Capacity Building Series: Secretariat Special Edition 5: Non-fiction writing for the junior student.* Available at <http://resources.curriculum.org/secretariat/files/Apr18JuniorStudent.pdf>

Poetry

- Literacy and Numeracy Secretariat. (2007, October). *What Works? Research into Practice: Research Monograph 7. Poetry: A powerful medium for literacy and technology development.* Available at <http://www.edu.gov.on.ca/eng/literacynumeracy/inspire/research/Hughes.pdf>
- pages 111–114 of Ministry of Education of Ontario. (2008). *A guide to effective literacy instruction, Grades 4 to 6: Volume 6. Writing.* Available at http://www.eworkshop.on.ca/edu/resources/guides/Guide_Lit_456_Vol_6_Writing.pdf
- pages 5.19–5.21 of Ministry of Education of Ontario. (2003). *A guide to effective instruction in reading, kindergarten to Grade 3.* Available at http://www.eworkshop.on.ca/edu/resources/guides/Reading_K_3_English.pdf

Purposeful and accountable talk

- pages 76–94 of Ministry of Education of Ontario. (2006). Chapter 3: Principles of effective literacy instruction. *A guide to effective literacy instruction, Grades 4 to 6: Volume 1.* Available at http://www.eworkshop.on.ca/edu/resources/guides/Guide_Lit_456_Vol_1_Pt2_Junior_Learner.pdf

Questions

- Ministry of Education of Ontario. Questioning video library: <http://www.edugains.ca/newsite/aer2/aervideo/questioning.html>

Reciprocal teaching

- Literacy and Numeracy Secretariat. (2009, January 30). Teaching for understanding: Summarization. *Webcasts for Educators.* Available at <http://resources.curriculum.org/secretariat/january30TU.shtml>

Primary Division: Reading and Writing

List of Resources (continued)

- Literacy and Numeracy Secretariat. (2006, October 25). Effective instruction in reading comprehension. *Webcasts for Educators*. Available at <http://resources.curriculum.org/secretariat/october25.shtml>
- Snowball, D. (2005). Reciprocal teaching session. *Teaching comprehension 3–6* [CD-ROM]. Melbourne: Education Services Australia. Available at <http://resources.curriculum.org/secretariat/files/Oct25teaching.pdf>

Shared reading

- Ministry of Education of Ontario. Learning module on shared reading. Available at <http://eworkshop.on.ca/edu/core.cfm?p=main&modColour=1&modID=21&m=111&L=1>

Storytelling

- Literacy and Numeracy Secretariat. (2009, October). *What Works? Research into Practice: Research Monograph 20. Storytelling and story writing*. Available at http://www.edu.gov.on.ca/eng/literacynumeracy/inspire/research/VWV_Storytelling.pdf

Students with special education needs

- Ministry of Education of Ontario. (2005). *Education for all: The report of the expert panel on literacy and numeracy instruction for students with special education needs, kindergarten to Grade 6*. Available at <http://www.edu.gov.on.ca/eng/document/reports/speced/panel/speced.pdf>

Success criteria

- Ministry of Education of Ontario. (2010). *Growing success: Assessment, evaluation and reporting in Ontario schools*. Available at <http://www.edu.gov.on.ca/eng/policyfunding/growSuccess.pdf>
- Ministry of Education of Ontario. AER GAINS resources to support *Growing Success*: <http://www.edugains.ca/newsite/aer2/index.html>

Teacher inquiry projects

- Ministry of Education of Ontario. (2004). *Me read? No way! A practical guide to improving boys' literacy skills*. Available at <http://www.edu.gov.on.ca/eng/document/brochure/meread/meread.pdf>
- Ministry of Education of Ontario. (2009, October). A variety of resources on boys' literacy available at <http://www.edu.gov.on.ca/eng/curriculum/boysliteracy.html>
- Literacy and Numeracy Secretariat. (2008, April). *What Works? Research into Practice: Research Monograph 12. Boys' underachievement: Which boys are we talking about?* Available at <http://www.edu.gov.on.ca/eng/literacynumeracy/inspire/research/Martino.pdf>

Teacher moderation

- pages 14–19 of Literacy and Numeracy Secretariat. (2006). *Facilitator's handbook: A guide to effective literacy instruction, Grades 4–6: Volume 2*. Available at http://www.curriculum.org/LNS/coaching/files/pdf/LiteracyHandbook_vol2.pdf
- Literacy and Numeracy Secretariat. (2007, September). *Capacity Building Series: Secretariat Special Edition 2. Teacher moderation: Collaborative assessment of student work*. Available at http://www.edu.gov.on.ca/eng/literacynumeracy/inspire/research/Teacher_Moderation.pdf
- Literacy and Numeracy Secretariat. (2007, September 10). Teacher moderation: Collaborative assessment of student work. *Webcast for Educators*. Available at <http://resources.curriculum.org/secretariat/september10.shtml>

Teaching-learning critical pathways

- Literacy and Numeracy Secretariat. (2008, June). *Capacity Building Series: Secretariat Special Edition 6. Teaching-learning critical pathways*. Available at http://www.edu.gov.on.ca/eng/literacynumeracy/inspire/research/teaching_learning.pdf

Text forms

- Literacy and Numeracy Secretariat. (2008, March). *Capacity Building Series: Secretariat Special Edition 5. Non-fiction writing for the junior student*. Available at <http://www.curriculum.org/secretariat/files/Apr18JuniorStudent.pdf>

Tiered approach

- Pages 13–14, 23–24, Appendix C. Ministry of Education of Ontario. *Learning for all* [June 2009 Draft]. Available at http://www.ontariodirectors.ca/L4All/L4A_en_downloads/LearningforAll%20K-12%20draft%20J.pdf

Primary Division: Reading and Writing

List of Resources (continued)

Towards an understanding of gender differences in literacy achievement

- Klinger, D., Shulha, L. & Wade-Woolley, L. (2009). *Towards an understanding of gender differences in literacy achievement* (EQAO Research). Available at http://www.eqao.com/Research/pdf/E/Towards_an_Understanding_of_Gender_Differences_in_Literacy_Achievement.pdf

Unfamiliar vocabulary

- Literacy and Numeracy Secretariat. (2010, February). *What Works? Research into Practice: Research Monograph 26. Science and literacy in the elementary classroom*. Available at http://www.edu.gov.on.ca/eng/literacynumeracy/inspire/research/WWV_science_literacy.pdf

Universal Design for Learning

- Pages 13–14, 23–24, Appendix C. Ministry of Education of Ontario. *Learning for all* [June 2009 Draft]. Available at http://www.ontariodirectors.ca/L4All/L4A_en_downloads/LearningforAll%20K-12%20draft%20J.pdf

Visual anchor charts

- Education Quality and Accountability Office. (2008, Spring). Celebrating the success of an Ontario school. *EQAO Connects*. Available at <http://www.eqao.com/eMagazine/2008/05/eMagArticle.aspx?Lang=E&ArticleID=05&ItemID=21>

Word sorts

- Literacy and Numeracy Secretariat. (2010, October 29). *Precision teaching in the primary classroom: Word sort, inference game, learning centres, writing, guided reading, student self-assessment* [Webcast]. Available at <http://resources.curriculum.org/secretariat/precision/index.shtml>

Word study

- Literacy and Numeracy Secretariat. (2010). Word study in action. *Webcasts for Educators*. Available at <http://resources.curriculum.org/secretariat/wordstudy/files/WordStudyGuide.pdf>
- Literacy and Numeracy Secretariat. (2010, September). *What works? Research into Practice: Research Monograph 27. Word study instruction: Enhancing reading comprehension*. Available at http://www.edu.gov.on.ca/eng/literacynumeracy/inspire/research/WWV_Word_Study.pdf

Writing frames

- page 20 of Ministry of Education of Ontario. (2004). *Me read? No way! A practical guide to improving boys' literacy skills*. Available at <http://www.edu.gov.on.ca/eng/document/brochure/merread/merread.pdf>

Primary Division: Mathematics

List of Resources

If you are reading the version of this document found on the EQAO Web site, www.eqao.com, please use the hyperlinks to the listed resources.

Resources

Bansho

- Literacy and Numeracy Secretariat. (2011, February). *Capacity Building Series: Secretariat Special Edition 17. Bansho* (board writing). Available at http://www.edu.gov.on.ca/eng/literacynumeracy/inspire/research/CBS_bansho.pdf

Concrete materials

- pages 19–24 of Ministry of Education of Ontario. (2003). *Early math strategy: The report of the expert panel on early math in Ontario*. Available at <http://www.edu.gov.on.ca/eng/document/reports/math/index.html>

Differentiated instruction

- pages 14–15 of Ministry of Education of Ontario. (2005). *Education for all: The report of the expert panel on literacy and numeracy instruction for students with special education needs, kindergarten to Grade 6*. Available at <http://www.edu.gov.on.ca/eng/document/reports/speced/panel/index.html>
- Literacy and Numeracy Secretariat. (2008, May 28). Differentiating mathematics instruction. *Webcasts for Educators*. Available at <http://www.curriculum.org/secretariat/may28.shtm>

English language learners

- Ministry of Education of Ontario. (2005). *Many roots, many voices: Supporting English language learners in every classroom*. Available at www.edu.gov.on.ca/eng/document/manyroots/manyroots.pdf

Four-Step Problem-Solving Model

- pages 36–38 of Ministry of Education of Ontario. (2006). *A guide to effective instruction in mathematics, kindergarten to Grade 6: Volume two, problem solving and communication*. Available at http://www.eworkshop.on.ca/edu/resources/guides/Guide_Math_K_6_Volume_2.pdf

Manipulatives

- pages 18–28 of Ministry of Education of Ontario. (2006). *A guide to effective instruction in mathematics, kindergarten to Grade 6: Volume three, classroom resources and management*. Available at http://eworkshop.on.ca/edu/resources/guides/Guide_Math_K_6_Volume_3.pdf

Problem-solving strategies

- pages 38–45 of Ministry of Education of Ontario. (2006). *A guide to effective instruction in mathematics, kindergarten to Grade 6: Volume two, problem solving and communication*. Available at http://www.eworkshop.on.ca/edu/resources/guides/Guide_Math_K_6_Volume_2.pdf

Promoting written communications

- pages 72–79 of Ministry of Education of Ontario. (2006). *A guide to effective instruction in mathematics, kindergarten to Grade 6: Volume two, problem solving and communication*. Available at http://www.eworkshop.on.ca/edu/resources/guides/Guide_Math_K_6_Volume_2.pdf

Shared mathematics

- pages 66–68 of Ministry of Education of Ontario. (2006). *A guide to effective instruction in mathematics, kindergarten to Grade 6: Volume one, foundations of mathematics instruction*. Available at http://eworkshop.on.ca/edu/resources/guides/Guide_Math_K_6_Volume_1.pdf

Think-pair-share, show and tell, co-operative problem solving

- pages 68–69 of Ministry of Education of Ontario. (2006). *A guide to effective instruction in mathematics, kindergarten to Grade 6: Volume two, problem solving and communication*. Available at http://www.eworkshop.on.ca/edu/resources/guides/Guide_Math_K_6_Volume_2.pdf

Universal Design for Learning

- pages 10–13 of Ministry of Education of Ontario. (2005). *Education for all: The report of the expert panel on literacy and numeracy instruction for students with special education needs, kindergarten to Grade 6*. Available at <http://www.edu.gov.on.ca/eng/document/reports/speced/panel/index.html>

STRATEGIES FOR TEACHERS: JUNIOR DIVISION

The following observations and suggested strategies for improvement are meant to assist educators in helping students develop and demonstrate their knowledge and skills in reading, writing and mathematics. The suggestions are based on an analysis of students' performance on the 2010–2011 Assessment of Reading, Writing and Mathematics, Junior Division, as well as on those of the previous four school years (2006–2007 to 2009–2010), and on feedback from teachers who scored the 2010–2011 assessment.

The released 2010–2011 assessment booklets can be accessed on the EQAO Web site, www.eqao.com.

For more information on the skills assessed and the kinds of questions used to measure them, see the junior-division *Framework*, on the EQAO Web site.

For more information on the terms in bold print, refer to the list of resources at the end of this section.

READING

Through a combination of multiple-choice and open-response questions about narrative, informational, poetic and graphic reading texts, the junior EQAO assessment focuses on three reading skills:

Reading Skill 1: understanding explicitly stated information and ideas

Reading Skill 2: understanding implicitly stated information and ideas

Reading Skill 3: making connections between information and ideas in a reading selection and personal knowledge and experience

Observations, Strategies and Resources

Junior Division: Reading	Observations	Strategies for Improvement
Reading Skills	In the past three years, the percentage of Grade 6 students scoring a Code 30 or 40 on open-response questions measuring Reading Skill 3 (making connections between the reading selection and their own knowledge and experience) has decreased. The percentage scoring a Code 30 or 40 on open-response questions measuring Reading Skill 2 (understanding implicitly stated information in a reading selection) has also decreased over time. Students performed equally well on open-response items measuring Reading Skill 2 and Reading Skill 3. Reading Skill 1 is not assessed in open-response questions. Students continued to perform better on multiple-choice questions measuring Reading Skill 1 than on those measuring Reading Skill 2 or 3.	Continue to share learning goals and co-construct success criteria (e.g., similar to those in EQAO's scoring guides for reading responses) at the outset of learning. Use the scoring rubrics and anchors available on the EQAO Web site to illustrate the reading comprehension required to score a Code 30 or 40 on open-response questions. Intensify practice making inferences. Teach students to question the author (about choices to make characters speak and act as they do and of particular words to describe people and items). Focus on noun/pronoun connections in texts to improve inferencing skills about who is speaking, acting, etc. To help students make inferences about dialogue in narratives, introduce the notion of "text" (what someone says) and "subtext" (what he or she might mean, what else is suggested). During shared reading, examine the connotative (affective) and denotative (cognitive) meaning of words. Reflect on the connections between the explicit and implied meanings of words and how doing so helps readers make inferences. Review with students the difference between a connection to a text and an extension of ideas about it. Model and provide think-alouds that show how to make relevant connections by activating prior knowledge about a subject (e.g., What have I already

Junior Division: Reading	Observations	Strategies for Improvement
Reading Skills (continued)		learned about character traits and how they are evident in narratives [Section B: Q. 31] or about heroism [Section C: Q.12] that helps me understand and respond to this text?).
Overall Reading Expectations from the Curriculum	Grade 6 students performed best on multiple-choice questions measuring Overall Reading Expectation 1 (read and demonstrate an understanding of a variety of literary, graphic and informational texts, using a range of strategies to construct meaning). Students performed less well on multiple-choice questions measuring Overall Reading Expectation 2 (recognize a variety of text forms, text features and stylistic elements and demonstrate an understanding of how they help communicate meaning). Their weakest performance was on multiple-choice questions measuring Overall Reading Expectation 3 (use knowledge of words and cueing systems to read fluently). On open-response questions, students performed equally well on Overall Reading Expectations 1 and 2. Overall Reading Expectation 3 is not assessed through open-response questions. Students continue to perform better on multiple-choice questions than on open-response questions when demonstrating comprehension of text content and form. Scorers reported that students who scored the top codes (Codes 30 and 40) in open-response reading tasks tended to use key words from the question to focus their answer and consistently provided specific and relevant details from the text to support their answers. Students who explained the relationship between their support and the rest of their answer received higher scores. For example, students used specific references from the long narrative to explain how both the key terms “mood” and “setting” were evident and they were able to demonstrate the relationship between the two.	Continue to provide effective instruction in reading comprehension to help students understand how to use strategies flexibly and effectively to analyze and interpret texts, and when to use them. Teach strategies for locating information and determining its importance, such as skimming and scanning, using text features, recognizing signal words and using the structure of the text for clues to meaning. Use literacy learning blocks to support students cross-curricularly in developing their use of before-, during- and after-reading strategies. Have students identify and compare the different elements of narrative, informational and graphic text (e.g., for narrative: character, theme, main idea, setting). Model and teach students how to identify different question types and the prompts that signal these (e.g., identify, describe, explain how). Subsequently provide students with intensive, ongoing opportunities to generate and present their own questions about texts. Model how to analyze questions for the structural or organizational patterns that they signal (e.g., Section A: Q. 11 prompts students to “compare the change in the juggler’s attitude from lines 8–14 to lines 35–40.” A full response requires a discussion of the attitude at two points. Support students with the skills required by Overall Expectation 3 by providing them with multiple opportunities to acquire academic language and to build content literacy vocabulary. As a staff, identify, introduce and reinforce the teaching of key words and terms used in and across subject areas (e.g., “characteristic,” “trait,” “vary,” “contribute”). Model how to apply a specific cueing system or strategy when reading a text. Give students the opportunity to demonstrate their ability to use words and cueing systems to read fluently (e.g., use words from oral vocabulary and grade-level texts, terminology used regularly in discussions and posted on anchor charts and words from shared-, guided- and independent-reading texts and resource materials in the curriculum subject areas). Model how students can use click or clunk to monitor their comprehension of vocabulary and ideas in reading selections.

Junior Division: Reading	Observations	Strategies for Improvement
Overall Reading Expectations from the Curriculum (continued)		Provide multiple opportunities for students to become familiar with the vocabulary, criteria and tools of assessment, so that they can gain the confidence and expertise to self-assess their reading comprehension and skills. Engage in teacher moderation as part of the teaching-learning critical pathways to help develop understanding of what makes an open-response question effective. After identifying student learning needs, use networked learning communities to establish a focus for teacher thinking and practice.
Text Types	Students performed best on the short narrative ("Nobody Knows the Difference") and the long narrative ("The Hero of Long Point"). Their performance on the graphic ("Fencing") and information ("Peach Baskets and Basketballs") text was similar. They experienced the most difficulty when answering questions related to the poem ("Juggling").	Teach literacy strategies across all content areas to help students acquire vocabulary for technical concepts, and fluency in reading information texts, which are often densely written and include more than one concept in each sentence. In all subject areas, continue guided and shared reading of graphic texts, with a focus on identifying specific textual features and explaining how they work together to provide information. After reading, have students create concept maps to support learning, and practise transferring information from one textual form (e.g., paragraph) into another (e.g., diagram) to reinforce their learning. Provide extensive practice for students to identify the main idea and important details and summarize this information in a variety of ways. To help students identify main ideas and supporting details, and relationships between events or actions, have them look for organizational patterns (e.g., problem and solution; action/cause and reaction/effect; sequential procedure) in all text types. Model how to attend to signal words to recognize these patterns. Continue to provide practice identifying evidence of narrative form and elements. Have students highlight words and phrases that signal each element (e.g., plot, character, setting) when reading and rereading narratives. Adapt literature circle roles to have students assume responsibility for identifying how each element is signalled and used (e.g., setting is signalled by reference to place; plot is signalled by actions; mood, by reference to feelings) and to support focused discussions of texts. Subsequently provide practice finding evidence of how elements are related. Provide charts of text features, forms and genres for student reference.

Junior Division: Reading	Observations	Strategies for Improvement
Text Types (continued)		Provide many opportunities for students to work toward reading informational text independently. Use reciprocal teaching to help students focus on the various components of the reading process (e.g., predicting, questioning, clarifying their thinking, and summarizing the main idea and key messages). Continue to use poetry to encourage students to develop meaning, expand their vocabulary, make inferences, identify the main idea, make judgments and draw conclusions. Provide students with opportunities to share their own favourite lyrics and poems, analyze them for what makes them effective and explore and create poems through new media.
Gender	Girls continue to outperform boys on nearly all of the multiple-choice questions; however, the performance gap in favour of girls for many questions was small. Similar to the rest of the population, boys performed best on the short narrative text type (“Nobody Knows the Difference”), although the gap in favour of girls was the largest for this text. As with the general population, both genders had the most difficulty with the poem (“Juggling”). As in 2010, the gender gap was smallest on the graphic text (“Fencing”).	To address connections between gender and literacy, identify the degree to which boys’ underachievement intersects with other factors (socioeconomic status, culture) in order to determine the most effective interventions for struggling readers and students at risk. Engage students in robust and higher-order thinking about how text form, content, purpose, audience and language work together. Model and employ questioning strategies from critical literacy to help students analyze, interpret and evaluate texts (e.g., examining texts for point of view, for the construction of gender roles, and for use of connotative language). Focus on how literacy can be used to help students read the world and exercise power over their environments. Adopt practices identified in <i>Towards an Understanding of Gender Differences in Literacy Achievement</i>, an EQAO research study examining strategies employed by schools with small gender gaps in assessment results, as follows: set high academic and behavioural expectations regardless of gender or background; develop consistent standards and understanding of effective literacy instruction among teachers of all subjects, informed by practice and research; foster positive attitudes toward reading; and use male role models to promote literacy as part of school culture. Review recent Ministry “Supports for Boys’ Literacy” resources for strategies to engage male students, improve their literacy skills and have a positive impact on all students (e.g., literature circles, differentiated instruction).

Junior Division: Reading	Observations	Strategies for Improvement
Gender (continued)		Consider developing and using integrated curriculum units that focus on big ideas, cultivate cross-curricular literacy, reinforce vocabulary, deepen knowledge about an issue or subject, and enable students to make thoughtful connections between ideas and information in texts and across subject areas. See the Council of Ontario Drama and Dance Educators units for examples. Encourage female students to develop their knowledge, skills and experiences by extending their reading of information texts and by exploring technology and using computers for a variety of purposes.
English Language Learners	English language learners performed equally well as the general population on open-response questions for both Reading Skill 2 and Reading Skill 3. They performed best on questions assessing Overall Reading Expectation 1. They performed at similar levels on questions assessing Overall Reading Expectations 2 and 3. The largest performance gap between English language learners and the general population occurred on Overall Reading Expectation 3. The gap between the two populations has decreased slightly overall since 2010.	Support English language learners with purposeful and accountable talk during the literacy learning block to build on prior knowledge and scaffold their learning. Engage English language learners and other students in word study instruction to enhance reading comprehension. Examine word structure to support students in decoding new words. Use subject-based word charts to build vocabulary and concept acquisition. Increase the reading of information and graphic texts in language classrooms to reinforce content and concepts from all subject areas. Capitalize on the terms (including roots and affixes) prevalent in science to help students decode academic language and reinforce concepts found across a variety of subject areas. Continue to incorporate visual tools (e.g., concept maps), vocabulary tools (e.g., word charts) and scaffolds (e.g., paragraph frames) to assist English language learners across all subject areas. Promote literacy in multilingual contexts by encouraging English language learners to read and write extensively in their own language, in order to become more fluent and proficient with these skills, and to develop both subject-based knowledge and vocabulary that can be transferred.

Junior Division: Reading	Observations	Strategies for Improvement
Students with Special Education Needs (Excluding Gifted)	Students with special education needs did not perform as well as the general population, and their pattern of relative strengths and weaknesses across questions was similar to that of the general population. Students with special education needs performed best on questions measuring Overall Reading Expectation 1 and Overall Reading Expectation 3. They performed better on multiple-choice than on open-response questions. Note that Overall Reading Expectation 3 is not assessed through open-response questions. For open-response reading items, they performed equally well on Reading Skills 2 and 3. The gap between the general population and students with special education needs was smallest for questions measuring Overall Reading Expectation 1. The performance gap decreased slightly for multiple-choice reading questions.	To better include students with special education needs, use a variety of instructional methods, including differentiated instruction and understanding by design, when programming for all students. Vary groupings during activities to ensure that students with exceptionalities are able to contribute their own ideas and benefit from those of their peers. Provide all students with the opportunity to use the booklets available on the EQAO Web site to practise responding to assessment questions. Encourage students to attempt all questions within the expected timelines.

WRITING

Through a combination of multiple-choice questions and short- and long-writing tasks, the junior division assessment focuses on the following writing skills:

Topic Development

- Content—developing a main idea with sufficient supporting details
- Organization—organizing information and ideas in a coherent manner

Conventions—use of spelling, grammar, punctuation

Observations, Strategies and Resources

Junior Division: Writing	Observations	Strategies for Improvement
Writing Skills	Overall, students performed well on multiple-choice writing questions. The number of students scoring Codes 30 and 40 for topic development on all short- and long-writing tasks has decreased between 2008 and 2011. Students' overall performance with respect to topic development was similar on the short- and long-writing tasks. They continue to perform better on conventions than on topic development for all writing tasks. Scorers noted the specific characteristics of effective writing as described in the writing rubrics. They noted, for example, that Code 30 and 40 responses to the long-writing prompt about the discovery of a cave demonstrated a knowledge of narrative form and conventions that included the following features: ample plot development organized coherently (to include a beginning, middle and end), specific and relevant supporting ideas (about character, action and/or setting). Responses that provided minimal plot development, simple or few supporting details about the adventure and abrupt endings generally received a Code 20. Additionally, students who accessed their prior learning (e.g., about caves and ancient civilizations) tended to provide better responses.	In order to better understand cross-curricular student needs in writing and to plan next steps, have teachers in all subjects and grades collaborate to establish a common vocabulary and assessment standards and to provide feedback about assignments that require a written response. Continue to share learning goals and co-construct success criteria (e.g., similar to those in EQAO's scoring guides for writing responses) at the outset of learning. Refer to the communications category of all subject achievement charts for information on how their criteria inform and support writing instruction. Use the videos and learning resources about moderated marking and teaching-learning critical pathways. Use Ministry writing exemplars that feature writing tasks (e.g., description, narrative, letter, report) to identify the writing's form, use of detail, organization and use of conventions, as well as the criteria for effective and ineffective topic development. Have students practise revising lower-level exemplars by deleting irrelevant information, adding specific and relevant details and reorganizing information. Use components of the writing process to help students build skills. Model how to brainstorm words and generate ideas related to a topic before writing. Model how to select relevant supporting details, add content by selecting sufficient details, and organize and present information in complete sentences during writing. Use a writer's workshop approach to provide whole-class direct-teaching of a specific topic, guided writing lessons and independent writing time during which students either write on their own or with support, or participate in peer or teacher-student conferencing. Provide templates such as The Four Roles of the Junior Writer for reference as students select a writing form, purpose and audience.

Junior Division: Writing	Observations	Strategies for Improvement
Overall Writing Expectations from the Curriculum	As in past years, students performed better relative to Overall Writing Expectation 3 (apply knowledge of language conventions and present written work effectively) and were less successful on questions measuring Overall Writing Expectation 1 (develop and organize content) and Overall Writing Expectation 2 (use knowledge of form and style in writing).	Continue to teach grammar and conventions in the context of writing, providing brief mini-lessons as necessary. Have students practise combining sentences to build their understanding of syntax and to learn to write more fluidly as they revise their own work. To help students develop and organize content, use hands-on strategies (e.g., provide them with cut-up exemplars that they must arrange before justifying the organization they have selected; provide the body of a paragraph and have them write the topic sentence). Extend opportunities for students to explore their interests and expand their knowledge base through non-fiction writing in all subject areas. Introduce students to commonly used non-fiction forms (e.g., recounts, reports, procedures, persuasive texts). Model how to find, select and organize information about a topic, using specific and relevant details. Emphasize that these details should include subject-area vocabulary and concepts (e.g., the topic of the value of healthy eating should prompt students to use words associated with health units, human biology and physical education). Continue to work with students on the written text forms required by the curriculum, and model how to organize writing in each. Model careful reading of the writing prompts, with a focus on using a highlighter to identify the topic, written form, purpose and audience. Use storytelling and story writing across all subject areas to reinforce knowledge and understanding about subject-area concepts. Model how to transform information texts into other writing forms such as graphic texts, dialogues, poems and narrative in order to help students understand how subject matter might be developed in various forms. Provide checklists for proofreading work, and opportunities for peer feedback that help students examine work for specific criteria such as writing form, words that signal an organizational pattern, number of specific and relevant details.
Gender	As in previous years, female students outperformed male students on most multiple-choice writing questions and on all the short- and long-writing tasks.	Conference with students to provide feedback on their writing to assist them in making the connection between the criteria they satisfied and those they did not. Show students examples of high-quality responses that use a variety of words and phrases, and continue to reinforce the use of descriptive language and the addition of adjectives and adverbs to sentences.

Junior Division: Writing	Observations	Strategies for Improvement
Gender (continued)		Use writing frames as a starting point for male students to structure a written response and then move them beyond using these mechanically to organizing their writing organically. Provide multiple opportunities for shared writing and for social interaction and talk before, during and after writing. Expand opportunities for all students to become familiar with the techniques and conventions of new literacies (e.g., Wikis, blogs, Web pages, YouTube). Encourage the creation of media and multimedia texts that require students to gather information, sort and organize ideas, select an appropriate form and language register, and integrate writing and visuals. Use writing in role techniques from the drama curriculum to help students use language flexibly for different purposes and audiences. Continue to use classroom practices proven by teacher inquiry projects to improve boys' literacy achievement, such as social interaction before writing.
English Language Learners	As with the general population, the percentage of English language learners at or above the provincial standard in writing has increased over the past five years. Their performance on both long- and short-writing tasks relative to topic development and conventions remains slightly below the performance of the general population. Although English language learners have not performed as well as the general population, their pattern of relative strengths and weaknesses has been similar. As was true for the general population, for topic development, English language learners performed similarly on the long- and the two short-writing tasks and better on the use of conventions for both the short- and the long-writing tasks.	To assist English language learners, continue to incorporate visual tools (e.g., paragraph frames) in all subject areas. Provide opportunities for students to communicate, orally and in writing, in their home language to brainstorm, rehearse and plan ideas for writing. Use storytelling and other oral language forms to build students' confidence and proficiency with language, and as a pre-writing strategy. Alternate oral brainstorming with writing to enhance and develop content. To improve student writing, provide timely feedback during the writing process. Focus on one or two of the students' immediate needs for improvement to cultivate thoughtful revision.
Students with Special Education Needs (Excluding Gifted)	The percentage of students with special education needs at or above the provincial standard in writing has increased over the past five years. These students continue to perform below the level of the general population, although their pattern of relative strengths and weaknesses remains similar.	Select the most appropriate high-yield strategies to address diverse needs and improve student thinking and writing (e.g., immediate feedback, ongoing small group assessment, differentiated writing instruction, accountable talk, mind maps and visual organizers). Support student thinking and writing with the use of concept maps and graphic organizers.

Junior Division: Writing	Observations	Strategies for Improvement
Students with Special Education Needs (Excluding Gifted) (continued)	However, the gap between the performance of students with special education needs and that of the student population as a whole on the long-writing tasks in terms of topic development is slowly decreasing. Nevertheless, a large proportion of students with special education needs have had difficulty getting beyond a Code 20 on the topic development rubric for the writing tasks. Students with special education needs performed similarly on topic development for all writing tasks. They were slightly more successful on the use of conventions for short-writing tasks than for the long-writing task. As was true for the general population, students with special education needs had difficulty responding to multiple-choice questions measuring Writing Skills 1 and 2. They were slightly more successful on multiple-choice questions measuring Writing Skill 3. Their results were lower than those of the general population.	For students reading below grade level, try literacy tutoring as an initial intervention. Refer to “Try Literacy Tutoring First” for effective tutoring criteria and information about in-school implementation. Provide students with special education needs opportunities to use assistive technologies for idea generation, organization and completion of writing tasks whenever possible.

MATHEMATICS

Through a combination of multiple-choice and open-response questions based on the *Ontario Curriculum* expectations from the strands Number Sense and Numeration, Measurement, Geometry and Spatial Sense, Patterning and Algebra, and Data Management and Probability, the junior-division EQAO assessment focuses on the following cognitive skills:

Knowledge and Understanding—facility with subject-specific content (knowledge) and comprehension of its meaning and significance (understanding)

Application—ability to select the appropriate “tool” or get the necessary information and apply it effectively to solve the problem

Thinking—ability to select and sequence a variety of tools to solve a problem and demonstrate a critical-thinking process

Observations, Strategies and Resources

Junior Division: Mathematics	Observations	Strategies for Improvement
Number Sense and Numeration	In this strand, students struggled with the questions involving multiple steps. Scorers of the open-response question that required students to determine the prime factors of a number noted that many students stopped their process without ensuring all factors listed were prime numbers. Scorers also noticed many students considered 1 a prime number.	Continue to provide students with opportunities to explore number-sense concepts in a variety of multi-step problem-solving contexts. Provide students with opportunities to explain the relationship between composite and prime numbers.
Measurement	In 2011, students performed least well on questions from this strand. Students struggled with questions requiring them to determine the surface areas of rectangular and triangular prisms. Many students confused surface area with volume. Scorers of the open-response question that required students to solve a problem involving the volumes of a triangular and a rectangular prism noted that students used the same process to determine the volume of both.	Continue to investigate surface area through a variety of tools (e.g., nets, concrete materials, dynamic geometry software, Polydrons) and in a variety of contexts. Give opportunities for students to explore surface area and volume simultaneously as opposed to in isolation. Continue to give students the opportunity to investigate the relationship among the height, the area of the base and the volume of triangular and rectangular prisms.
Geometry and Spatial Sense	Many students reversed the order of the coordinates when reading and plotting points in the first quadrant of a Cartesian plane. Scorers of the open-response question that required students to construct a pentagon, given side and angle measurements, noted that many students tried to draw a regular pentagon, making it impossible to incorporate all the properties required by the question. Students struggled with the multiple-choice question involving lines of symmetry.	Continue to emphasize that the horizontal coordinate comes before the vertical coordinate in ordered pairs and provide opportunities for students to practise reading and plotting coordinates. Be sure to provide examples of irregular polygons as well as regular polygons when students investigate their properties. Continue to have students sort polygons according to their lines of symmetry.

Junior Division: Mathematics	Observations	Strategies for Improvement
Patterning and Algebra	In 2011, students performed best on questions from this strand. Most students were successful on the questions requiring them to extend growing patterns, whether numeric or geometric. Scorers of the open-response question that required students to describe the pattern rules of two shrinking patterns noted that students struggled to describe and extend the shrinking pattern created by dividing by two.	Continue to provide opportunities for students to explore patterns generated by multiplying or dividing by a constant to get the next term.
Data Management and Probability	Overall, students were successful at reading and interpreting information in bar graphs. Scorers of the open-response question that required students to determine the theoretical probability of an event noted that some students missed important information in the question.	Continue to provide students with opportunities to explore data management and probability concepts in a variety of multi-step problem-solving contexts.
Cognitive Skill	For the fourth consecutive year, students performed best on the questions mapped to the cognitive skill Knowledge and Understanding and least well on the questions mapped to Thinking. Students continue to have difficulty with multi-step problems.	Continue to model appropriate problem-solving strategies and provide students with opportunities to solve a variety of engaging problems. See the Four-Step Problem-Solving Model. Introduce concepts and procedures through problem-solving. Employ interactive classroom strategies, such as Bansho, to engage all students as problem solvers. Provide instruction to help students organize the information in problems, including through the use of graphic organizers. Reinforce prior mathematical knowledge when introducing new concepts and procedures. Model the appropriate use of concrete materials and manipulatives to visualize concepts and solve problems and provide these resources for students to use regularly.
Students with Special Education Needs (Excluding Gifted)	Students with special education needs continue to perform consistently more than 15 percentage points below the general Grade 6 population on all strands, cognitive skills and question types.	Continue to differentiate instruction using the Universal Design for Learning for all students, but particularly for students with special education needs. Review the allowed accommodations listed in EQAO's Guide for Accommodations, Special Provisions and Exemptions, assign them to students individually and incorporate them into the students' regular program.

Junior Division: Mathematics	Observations	Strategies for Improvement
English Language Learners	Overall, English language learners' performance was slightly below the general population on all cognitive skills, question types and strands. The achievement trends for English language learners are the same as those for the general population for all strands, cognitive skills and question types.	Continue to provide opportunities for interactive problem solving and discussion of a variety of solutions (e.g., through Bansho) to all students, but particularly to English language learners. Emphasize mathematical terminology while teaching concepts.
Gender	Overall, in 2011, male and female students performed equally well on multiple-choice and open-response questions across all strands and skills.	Provide collaborative learning opportunities in clusters or pairs using different strategies (e.g., think-pair-share). Be aware of gender differences when planning inclusive instruction.

Junior Division: Reading and Writing

List of Resources

If you are reading the version of this document found on the EQAO Web site, www.eqao.com, please use the hyperlinks to the listed resources.

Main resources

Literacy and Numeracy Secretariat. (2010, October). *What works? Research into Practice: Research Monograph 29. Improving student writing: Using feedback as a tool*. Available at http://www.edu.gov.on.ca/eng/literacynumeracy/inspire/research/WW_Improving_Student_Writing.pdf

- Feedback (self, teacher, peer)
- Self-assessment
- Writing process

Literacy and Numeracy Secretariat. (2010, September). *What works? Research into Practice: Research Monograph 27. Word study instruction: Enhancing reading comprehension*. Available at http://www.edu.gov.on.ca/eng/literacynumeracy/inspire/research/WW_Word_Study.pdf

- Connotation
- Denotation
- Word study

Ministry of Education of Ontario. (2008). *A guide to effective literacy instruction, Grades 4–6: Volume 5. Reading*. Available at http://www.eworkshop.on.ca/edu/resources/guides/Guide_Lit_456_Vol_5_Reading.pdf

- Academic language: pages 24–25
- Activating prior knowledge: page 88
- Before-, during- and after-reading strategies: page 24
- Click or clunk: page 55
- Cueing systems: page 16
- Locating information: pages 32–39 (Sample Lesson 2.1: Identifying the main idea and the author's purpose)
- Shared-, guided- and independent-reading: pages 60–85
- Signal words: pages 40–41
- Summarizing: pages 32–35
- Think-alouds: throughout

Ministry of Education of Ontario. (2008). *A guide to effective literacy instruction, Grades 4–6: Volume 6. Writing*. Available at http://www.eworkshop.on.ca/edu/resources/guides/Guide_Lit_456_Vol_6_Writing.pdf

- Conferencing: pages 25–27
- Graphic organizers: page 50
- Poetry: pages 111–114
- Text forms: pages 11–13
- Writing process: pages 36–45

Other resources

Assistive technologies

- Chapter 10 of Ministry of Education of Ontario. (2005). *Education for all: The report of the expert panel on literacy and numeracy instruction for students with special education needs, kindergarten to Grade 6*. Available at <http://www.edu.gov.on.ca/eng/document/reports/speced/panel/speced.pdf>

Boys' underachievement

- Literacy and Numeracy Secretariat. (2008, April). *What Works? Research into Practice: Research Monograph 12. Boys' underachievement: Which boys are we talking about?* Available at <http://www.edu.gov.on.ca/eng/literacynumeracy/inspire/research/Martino.pdf>

Concept maps

- pages 14–15 of Ministry of Education of Ontario. (2005). *Education for all: The report of the expert panel on literacy and numeracy, instruction for students with special education needs, kindergarten to Grade 6*. Available at <http://www.edu.gov.on.ca/eng/document/reports/speced/panel/speced.pdf>

Junior Division: Reading and Writing

List of Resources (continued)

- Literacy and Numeracy Secretariat. (2006, September 28). Building upon our successes. Webcasts for Educators. Available at <http://www.curriculum.org/secretariat/september28.shtml>

Content literacy

- Literacy and Numeracy Secretariat. (2008, May). *What Works? Research into Practice: Research Monograph 13. Content literacy*. Available at <http://www.edu.gov.on.ca/eng/literacynumeracy/inspire/research/contentLiteracy.pdf>
- Literacy and Numeracy Secretariat. (2010, February). *What Works? Research into Practice: Research Monograph 26. Science and literacy in the elementary classroom*. Available at http://www.edu.gov.on.ca/eng/literacynumeracy/inspire/research/WW_science_literacy.pdf

Council of Ontario Drama and Dance Educators Units

- Council of Ontario Drama and Dance Educators.
- Grade 5 Dance, Drama and Critical Literacy Unit: In or Out. Available at <http://code.on.ca/resource/or-out>
- Grade 6 Dance, Drama and Critical Literacy Unit: Departures. Available at <http://code.on.ca/resource/departures>

Critical literacy

- Literacy and Numeracy Secretariat. (2010, December). *What works? Research into Practice: Research Monograph 32. Developing critical literacy skills: Exploring masculine and feminine stereotypes in children's literature*. Available at http://www.edu.gov.on.ca/eng/literacynumeracy/inspire/research/WW_Critical_Literacy.pdf
- Literacy and Numeracy Secretariat. (2007, November 29). Critical literacy plan. Webcasts for educators: Additional materials. Available at <http://www.curriculum.org/secretariat/files/Nov29LessonPlans.pdf>
- Critical Literacy Webcasts for Educators: <http://resources.curriculum.org/secretariat/november29.shtml>

Differentiated instruction

- Literacy and Numeracy Secretariat. (2006, March 29). Differentiated instruction: Continuing the conversation. Webcasts for Educators. Available at <http://www.curriculum.org/secretariat/march29.shtml>
- Literacy and Numeracy Secretariat. (2008, May 2). High-yield strategies to improve student learning: Differentiated writing instruction. Webcasts for Educators. Available at <http://www.curriculum.org/secretariat/may2.shtml>
- Ministry of Education of Ontario. (2008). Various resources available through the "Student success: Differentiated instruction" Web site: <http://www.edugains.ca/newsite/di2/index.html>
- Ministry of Education of Ontario (2009, June). Chapter 2. *Learning for all, K-12 [Draft]*. Available at http://www.ontariodirectors.ca/L4All/L4A_en_downloads/LearningforAll%20K-12%20draft%20.pdf

Drama curriculum

- *The Ontario Curriculum, Grades 1–8: The Arts* (2009), available at <http://www.edu.gov.on.ca/eng/curriculum/elementary/arts18b09curr.pdf>

Effective instruction in reading comprehension

- Literacy and Numeracy Secretariat. (2007, January 31). *Making sense of reading instruction* [Webcast]. Available at <http://www.curriculum.org/secretariat/january31.shtml>

Engaging male students

- Literacy and Numeracy Secretariat. (2009, October). *Engaging boys: Powerful possibilities for all learners* [Webcasts]. Available at <http://www.curriculum.org/secretariat/engaging/index.shtml>
- Ministry of Education of Ontario. Supports for boys' literacy resources: <http://www.edugains.ca/newsite/literacy2/supportsboyliteracy.html>

English language learners

- Literacy and Numeracy Secretariat. (2009, October). *Capacity Building Series: Secretariat Special Edition 11. A world of words: Enhancing vocabulary development for English language learners*. Available at http://www.edu.gov.on.ca/eng/literacynumeracy/inspire/research/world_of_words.pdf

Junior Division: Reading and Writing

List of Resources (continued)

- pages 1 and 3–8 of Ministry of Education of Ontario. (2006). *A guide to effective literacy instruction, Grades 4 to 6: Volume 3. Planning and classroom management*. Available at http://www.eworkshop.on.ca/edu/resources/guides/Guide_Lit_456_Vol_3_Planning.pdf
- pages 23–26 of Ministry of Education. (2005). *Many roots, many voices: Supporting English language learners in every classroom*. Available at <http://www.edu.gov.on.ca/eng/document/manyroots/manyroots.pdf>
- Literacy and Numeracy Secretariat. (2005, December 7). Teaching and learning in multilingual Ontario. *Webcasts for Educators*. Available at <http://www.curriculum.org/secretariat/december7.shtml>

Female students

- Literacy and Numeracy Secretariat. (2007, October) *What works? Research into Practice: Research Monograph 8. Gender differences in computer attitudes, ability, and use in the elementary classroom*. Available at <http://www.edu.gov.on.ca/eng/literacynumeracy/inspire/research/Kay.pdf>

High-yield strategies

- Literacy and Numeracy Secretariat. (2008, May 2). High-yield strategies to improve student learning. *Webcasts for Educators*. Available at <http://www.curriculum.org/secretariat/may2.shtml>

Higher-order thinking

- Literacy and Numeracy Secretariat. (2007). *Literacy Series: Module 3. Connecting reading and writing for higher-order thinking* [PowerPoint presentation]. Available at <http://www.curriculum.org/LNS/coaching/profresources.shtml> and http://resources.curriculum.org/LNS/coaching/files/ppt/Comprehending_Module3.ppt (New link)
- Literacy and Numeracy Secretariat. (2009, April 21). Quality teaching: It's intentional. *Webcasts for Educators*. Available at <http://www.curriculum.org/secretariat/april21.shtml>

Integrated curriculum

- Literacy and Numeracy Secretariat. (2010, September). *What works? Research into Practice: Research Monograph 28. Integrated curriculum: Increasing relevance while maintaining accountability*. Available at http://www.edu.gov.on.ca/eng/literacynumeracy/inspire/research/WW_Integrated_Curriculum.pdf

Literacy in multilingual contexts

- Literacy and Numeracy Secretariat. (2007, June). *Promoting literacy in multilingual contexts* (What Works? Research into Practice Research Monograph 5). Available at <http://www.edu.gov.on.ca/eng/literacynumeracy/inspire/research/Cummins.pdf>

Literacy learning blocks

- Literacy and Numeracy Secretariat. (2007, May). *What Works? Research into Practice: Special Edition 1. Learning blocks for literacy and numeracy*. Available at http://www.curriculum.org/LNS/coaching/files/pdf/WhatWorks_May07.pdf
- Ministry of Education of Ontario. (2006). *Timetabling. A guide to effective literacy instruction, Grades 4 to 6: Volume 3. Planning and classroom management* (pp. 45–50). Available at http://www.eworkshop.on.ca/edu/resources/guides/Guide_Lit_456_Vol_3_Planning.pdf

Literature circles

- Literacy and Numeracy Secretariat. (2009, December). *Literature circles webcast*. Available at <http://www.curriculum.org/secretariat/circles/index.shtml>
- pages 7.19–7.23 of Ministry of Education of Ontario. (2003). *A guide to effective instruction in reading, kindergarten to Grade 3*. Available at http://www.eworkshop.on.ca/edu/resources/guides/Reading_K_3_English.pdf

Making inferences

- Literacy and Numeracy Secretariat. (2004). *Literacy Series: Module 1. Comprehending in action: Inferring* [PowerPoint presentation]. Available at <http://www.curriculum.org/LNS/coaching/profresources.shtml> and http://resources.curriculum.org/LNS/coaching/files/ppt/Comprehending_Module1.ppt (New link)
- Literacy and Numeracy Secretariat. (2004). *Literacy Series: Module 1. Comprehending in action: Inferring*. Available at http://resources.curriculum.org/LNS/coaching/files/ppt/Comprehending_Module1.ppt (For **dialogue** go to Teacher Resources booklet, Module 1, p. 46.) Available at http://resources.curriculum.org/LNS/coaching/files/pdf/Comprehending_Resources.pdf
- Literacy and Numeracy Secretariat. (2010, October 29). *Precision teaching in the primary classroom: Word sort, inference game, learning centres, writing, guided reading, student self-assessment* [Webcast]. Available at <http://www.curriculum.org/secretariat/precision/index.shtml>

Junior Division: Reading and Writing

List of Resources (continued)

Male students

- pages 17–21 and 37–38 of Ministry of Education of Ontario. (2004). *Me read? No way! A practical guide to improving boys' literacy skills*. Available at <http://www.edu.gov.on.ca/eng/document/brochure/merread/merread.pdf>
- Various Ministry of Education resources on boys' literacy. Available at <http://www.edu.gov.on.ca/eng/curriculum/boysliteracy.html>
- Ministry of Education of Ontario. (2009). *The road ahead: Boys' literacy teacher inquiry report, 2005 to 2008*. Available at http://www.edu.gov.on.ca/eng/curriculum/RoadAhead2009_Supplement.pdf

Moderated marking

- Literacy and Numeracy Secretariat. (2007, September 10). Teacher moderation: Collaborative assessment of student work. *Webcasts for Educators*. Available at <http://www.curriculum.org/secretariat/september10.shtml>
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- Literacy and Numeracy Secretariat. (2008, May 2). High-yield strategies to improve student learning: Reading conference: Text structure. *Webcasts for Educators*. Available at <http://www.curriculum.org/secretariat/may2.shtml>
- Literacy and Numeracy Secretariat. (2009, April 21). Quality teaching: It's intentional. *Webcasts for Educators*. Available at <http://www.curriculum.org/secretariat/april21.shtml>

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- Pages 111–114 of Ministry of Education of Ontario. (2008). *A guide to effective literacy instruction, Grades 4 to 6: Volume 6. Writing*. Available at http://www.eworkshop.on.ca/edu/resources/guides/Guide_Lit_456_Vol_6_Writing.pdf

Purposeful and accountable talk

- pages 76–94 of Ministry of Education of Ontario. (2006). Chapter 3: Principles of effective literacy instruction. *A guide to effective literacy instruction, Grades 4–6: Volume 1*. Available at http://www.eworkshop.on.ca/edu/resources/guides/Guide_Lit_456_Vol_1_Pt2_Junior_Learner.pdf

Questioning the author

- Literacy and Numeracy Secretariat. (2008, May). *What Works? Research into Practice: Research Monograph 13. Content literacy*. Available at <http://www.edu.gov.on.ca/eng/literacynumeracy/inspire/research/contentLiteracy.pdf>
- Literacy and Numeracy Secretariat. (2004). Literacy Series: Module 1. *Comprehending in action: Inferring* [PowerPoint presentation]. Available at <http://www.curriculum.org/LNS/coaching/profresources.shtml>

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Junior Division: Reading and Writing

List of Resources (continued)

- Literacy and Numeracy Secretariat. (2006, October 25). Effective instruction in reading comprehension. *Webcasts for Educators*. Available at <http://www.curriculum.org/secretariat/october25.shtml>
- Snowball, D. (2005). Reciprocal teaching session. *Teaching comprehension 3–6* [CD-ROM]. Melbourne: Education Services Australia. Available at <http://www.curriculum.org/secretariat/files/Oct25teaching.pdf>
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- Literacy and Numeracy Secretariat. (2007, May). *Learning blocks for literacy and numeracy*. Available at <http://www.edu.gov.on.ca/eng/literacynumeracy/inspire/research/LearningBlocks.pdf>

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- pages 32–37 of Ministry of Education of Ontario. (2009). *Me read? And how! Ontario teachers report on how to improve boys' literacy skills*. Available at http://www.edu.gov.on.ca/eng/curriculum/meRead_andHow.pdf

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Success criteria

- Ministry of Education of Ontario. (2010). *Growing success: Assessment, evaluation and reporting in Ontario schools*. Available at <http://www.edu.gov.on.ca/eng/policyfunding/growSuccess.pdf>
- Literacy and Numeracy Secretariat. (n.d.). *Informing practice: Learning intentions and success criteria*. [Webcasts]. Available at <http://www.curriculum.org/secretariat/studentled/informing.shtml>

Summarizing

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- pages 32–35 of Ministry of Education of Ontario. (2008). *A guide to effective literacy instruction, Grades 4 to 6: Volume 5. Reading*. Available at http://www.eworkshop.on.ca/edu/resources/guides/Guide_Lit_456_Vol_5_Reading.pdf

Teacher inquiry projects

- Ministry of Education of Ontario. (2004). *Me read? No way! A practical guide to improving boys' literacy skills*. Available at <http://www.edu.gov.on.ca/eng/document/brochure/meread/meread.pdf>
- Various Ministry of Education resources on boys' literacy: <http://www.edu.gov.on.ca/eng/curriculum/boysliteracy.html>

Teacher moderation

- pages 14–19 of Literacy and Numeracy Secretariat. (2006). *Facilitator's handbook: A guide to effective literacy instruction, Grades 4–6: Volume 2*. Available at http://www.curriculum.org/LNS/coaching/files/pdf/LiteracyHandbook_vol2.pdf

Junior Division: Reading and Writing

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- Literacy and Numeracy Secretariat. (2007, September). *Capacity Building Series: Secretariat Special Edition 2. Teacher moderation: Collaborative assessment of student work*. Available at http://www.edu.gov.on.ca/eng/literacynumeracy/inspire/research/Teacher_Moderation.pdf
- Literacy and Numeracy Secretariat. (2007, September 10). Teacher moderation: Collaborative assessment of student work. *Webcasts for Educators*. Available at <http://www.curriculum.org/secretariat/september10.shtml>

Teaching-learning critical pathways

- Literacy and Numeracy Secretariat. (2008, June). *Capacity Building Series: Secretariat Special Edition 6. Teaching-learning critical pathways*. Available at http://www.edu.gov.on.ca/eng/literacynumeracy/inspire/research/teaching_learning.pdf
- Literacy and Numeracy Secretariat. (2009, November). Teaching-learning critical pathways [Webcast]. Available at <http://www.curriculum.org/secretariat/criticalpathways/home.shtml>

Text forms

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- Literacy and Numeracy Secretariat. (2008, March). *Capacity Building Series: Secretariat Special Edition 5, Non-fiction writing for the junior student*. Available at <http://www.curriculum.org/secretariat/files/Apr18JuniorStudent.pdf>

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- Text, features, forms and genres. Available at <http://www.curriculum.org/secretariat/files/Oct25TextFeatures.pdf>

Think-alouds

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Towards an understanding of gender differences in literacy achievement

- Klinger, D., Shulha, L., & Wade-Woolley, L. (March 2009). *Towards an understanding of gender differences in literacy achievement* (EQAO Research). Available at http://www.eqao.com/Research/pdf/E/Towards_an_Understanding_of_Gender_Differences_in_Literacy_Achievement.pdf

Try literacy tutoring first

- Literacy and Numeracy Secretariat. (2009, October). *Capacity Building Series: Secretariat Special Edition 21. Try literacy tutoring first*. Available at http://www.edu.gov.on.ca/eng/literacynumeracy/inspire/research/VWW_Literacy_Tutors.pdf

Vocabulary

- Literacy and Numeracy Secretariat. (2009, October). *Capacity Building Series: Secretariat Special Edition 11. A world of words: Enhancing vocabulary development for English language learners*. Available at http://www.edu.gov.on.ca/eng/literacynumeracy/inspire/research/world_of_words.pdf

Writer's workshop

- Ministry of Education of Ontario. Learning module on writer's workshop: <http://www.eworkshop.on.ca/edu/core.cfm?p=main&modColour=1&modID=24&m=111&L=1>

Writing exemplars

- Ministry of Education of Ontario. (1999). *The Ontario curriculum—Exemplars, Grades 1–8: Writing*. Available at <http://www.edu.gov.on.ca/eng/curriculum/elementary/writing18ex.pdf>

Writing form, purpose, and audience

- The four roles of the junior writer. Available at http://www.eworkshop.on.ca/edu/pdf/Mod24_roles_writer.pdf

Writing frames

- page 20 of Ministry of Education of Ontario. (2004). *Me read? No way! A practical guide to improving boys' literacy skills*. Available at <http://www.edu.gov.on.ca/eng/document/brochure/meread/meread.pdf>

Junior Division: Mathematics

List of Resources

If you are reading the version of this document found on the EQAO Web site, www.eqao.com, please use the hyperlinks to the listed resources.

Resources

Bansho

- Literacy and Numeracy Secretariat. (2011, February). *Capacity Building Series: Secretariat Special Edition 17. Bansho* (board writing). Available at http://www.edu.gov.on.ca/eng/literacynumeracy/inspire/research/CBS_bansho.pdf

Differentiated instruction

- pages 14–15 of Ministry of Education of Ontario. (2005). *Education for all: The report of the expert panel on literacy and numeracy instruction for students with special education needs, kindergarten to Grade 6*. Available at <http://www.edu.gov.on.ca/eng/document/reports/speced/panel/index.html>
- Literacy and Numeracy Secretariat. (2008, May 28). Differentiating mathematics instruction. *Webcasts for Educators*. Available at <http://www.curriculum.org/secretariat/may28.shtml>

English language learners

- Ministry of Education of Ontario. (2005). *Many roots, many voices: Supporting English language learners in every classroom*. Available at www.edu.gov.on.ca/eng/document/manyroots/manyroots.pdf

Four-step problem-solving model

- pages 36–38 of Ministry of Education of Ontario. (2006). *A guide to effective instruction in mathematics, kindergarten to Grade 6: Volume 2. Problem solving and communication*. Available at http://www.eworkshop.on.ca/edu/resources/guides/Guide_Math_K_6_Volume_2.pdf

Problem-solving strategies

- pages 38–45 of Ministry of Education of Ontario. (2006). *A guide to effective instruction in mathematics, kindergarten to Grade 6: Volume 2. Problem solving and communication*. Available at http://www.eworkshop.on.ca/edu/resources/guides/Guide_Math_K_6_Volume_2.pdf

Think-pair-share, show and tell, co-operative problem solving

- pages 68–69 of Ministry of Education of Ontario. (2006). *A guide to effective instruction in mathematics, kindergarten to Grade 6: Volume 2. Problem solving and communication*. Available at http://www.eworkshop.on.ca/edu/resources/guides/Guide_Math_K_6_Volume_2.pdf

Universal Design for Learning

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