News Releases Government of Newfoundland and Labrador - Canada

Education March 19, 2008

Significant Changes Announced Under Excellence in Mathematics Strategy

As part of the Provincial Government's \$11.3 million *Excellence in Mathematics* strategy, a new math curriculum will be implemented across the K-12 education system. The Honourable Joan Burke, Minister of Education, said today the new program will strike a better balance, particularly in earlier grades, between building basic math skills and understanding math concepts. The adoption of a new curriculum and textbooks is one of 15 recommendations stemming from an independent math review undertaken this past fall.

"The first year of the *Excellence in Mathematics* strategy has seen the addition of 25 numeracy support teachers who work directly with our classroom teachers," said Minister Burke. "We have also made the initial step in selected grades of reducing the number of topics that teachers and students are required to cover and funding has been provided to schools across the province to hold special activities and events to create a positive attitude toward math, such as the extremely successful For the Love of Math day held at Clarenville Middle School. We have now completed a comprehensive review of the K-12 math curriculum, led by Dr. Bob Crocker, and I am pleased to announce today that we are accepting all recommendations from this review in their entirety."

The report's recommendations centre around four key areas:

- New curriculum, adopted from the Western and Northern Curriculum Protocol (WNCP), which will follow a three-year implementation schedule;
- New textbooks for all grade levels;
- Significant initial and sustained professional development for teachers; and,
- Development of guidelines for the assignment of homework.

"While a change to the curriculum itself is important, new textbooks and a focus on professional development for our teachers are also critical to ensuring success in math for our students," said Minister Burke. "The changes that will be made reflect each of the needs identified by teachers, administrators and parents and our shared commitment to offer our young people the best education possible."

Minister Burke noted that the *Excellence in Mathematics* strategy includes support for parents with the help they provide their children at home. The development of workshops and materials specifically geared to parents has been underway and will now be finalized reflecting the new curriculum and textbooks. In addition, this material will now include a guide to homework for parents, as identified in the report's recommendations.

The WNCP curriculum was initiated in the western provinces and territories in 2007 and stemmed from the need to address issues similar to those experienced in Newfoundland and Labrador. Other Atlantic provinces have now initiated a review of the WNCP curriculum. According to Dr. Crocker's review, the WNCP curriculum addresses the concern that the current program does not place a strong focus on basic mathematics skills. The WNCP curriculum retains a strong emphasis on conceptual mathematics, but also brings back a basic skills agenda, by reducing the total number of topics, especially in the early grades.

In September 2008, students in Kindergarten, and Grades 1, 4 and 7 will begin using the new curriculum,

complete with a new textbook. Professional development opportunities for teachers will begin this spring. This will be followed with implementation in Grades 2, 5, and 8 in September 2009, and Grades 3, 6, and 9 in September 2010. Changes to the senior high school program will be phased in, beginning with Grade 10 in September 2010.

"This is a time of incredible investment and progress in our education system," said Minister Burke. "Our budget has exceeded \$1 billion, the greatest financial commitment to our students and teachers in the province's history. This funding is being used to make significant improvements in areas which have the greatest impact, such as services to students with special needs through the ISSP/Pathways Review and a new approach to allocating teaching resources based on class size caps and a focus on individual schools.

"These advancements, coupled with the new math curriculum, will help create a more positive learning experience in our classrooms for students and teachers alike. Teachers will have greater flexibility, time and increased professional development to help them more effectively cover the mathematics curriculum. There is no doubt that students in this province can perform to just as high a standard as students anywhere in the world. We will keep working to provide the support to make that happen," said Minister Burke.

The K-12 Mathematics Curriculum Review can be accessed online at www.gov.nl.ca/edu.

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BACKGROUNDER

On April 4, 2007, the Williams Government announced its *Excellence in Mathematics* Strategy. The strategy has three main components:

- Curriculum Development and Review, with a focus on the nature and amount of curriculum covered and a review of textbooks;
- Excellence in Teaching and Learning, with a focus on professional development and resources for teachers; and,
- **Parent Support**, with a focus on sessions and workshops for parents and the development of materials to assist parents at home.

Update:

- A preliminary curriculum review was carried out by a committee of teachers and program specialists. This resulted in the identification of topics that can be removed or moved to another grade level and these changes were in place for September 2007. These changes, which affected Grades 1 7 and Grade 10, resulted in coverage of fewer topics per grade level. This allowed teachers to go spend more time on the remaining topics, increasing the opportunity for practice and mastery.
- As a follow-up to this initial review, a more comprehensive review of the current provincial mathematics curriculum was initiated. The review considered research in K – 12 mathematics teaching and learning, as well as a comparative analysis of the provincial mathematics curriculum across Canada and in other countries. Atlantic Evaluation and Research Consultants (Dr. Robert Crocker, principal investigator) was the successful candidate.
- Upon receiving the report, an analysis of the 15 recommendations was conducted and the decision was made to accept all recommendations.

Mathematics Review Recommendations and Government Response

Recommendations	Action
The Western and Northern Canadian Protocol (WNCP) Common Curriculum Frameworks for Mathematics K-9 and Mathematics 10-12 (WNCP, 2006 and 2007) be adopted as the basis for the K-12 mathematics curriculum in this province.	Accept recommendations as is and implement new mathematics curriculum based on the following schedule: September 2008 · Kindergarten and Grades 1, 4, 7 September 2009 · Grades 2, 5, 8 September 2010 · Grades 3, 6, 9, 10 September 2011 · Grade 11 September 2012 · Grade 12
Implementation begin with Grades K, 1, 4, 7 in September, 2008, followed by in Grades 2,5,8 in 2009 and Grades 3,6,9 in September 2010.	
The senior high school program be implemented on the same schedule as now proposed for the western and northern jurisdictions, starting in 2010.	
The proposed revised program not be piloted	

implementing the program in 2007-08.	
Textbooks and other resources specifically designed to match the Western and Northern Canadian Protocol (WNCP) and frameworks be adopted as an integral part of the proposed program change.	The textbooks and other learning resources will be chosen from those designed to match the WNCP curriculum and authorized as such.
Implementation of the proposed changes to the mathematics curriculum be accompanied by an introductory professional development program designed to introduce the curriculum to all mathematics teachers at the appropriate grade levels prior to the first year of implementation.	Introductory professional development will be provided according to the curriculum implementation schedule.
At least partial support for professional development be negotiated with publishers as part of a textbook adoption package.	Support will be solicited from publishers whose student and teacher resources are selected.
Numeracy support teachers have a primary role in the delivery of professional development for primary/elementary teachers	Program development specialists will work with both program specialists at the district offices as well as the numeracy support teachers in developing and delivering professional development. Numeracy support teachers will play an integral role in ensuring sustained/follow-up professional development. To ensure sustained and follow -up professional development, department heads in intermediate and high schools will be included as part of the professional development sessions.
The responsibilities of mathematics department heads in intermediate and high schools (whether 7-12, 10-12 or any other combination) include facilitating introductory professional development sessions and follow- up of these sessions.	
lin the short term, numeracy support teachers assigned to Grades K – 6 be considered as lead teachers for mathematics in the schools for which they are responsible	
The work of numeracy support teachers be systematically monitored for at least two years, using methods designed to assess their impact on fidelity of implementation and on outcomes	A monitoring process will be finalized and implemented to determine the effectiveness of the numeracy support teachers.
Following this period, a determination be made of whether this program should be continued or whether the resources would be better utilized to support lead teachers at the individual school level	Findings from the evaluation of the effectiveness of the numeracy support teachers will be used to make decisions regarding changes in the role of these positions.
The Department of Education reinforce, through reference in its curriculum documents and professional development activities, well established features of effective teaching: maximizing the use of time, maximizing student engagement in academically meaningful work, high expectations, maximizing content coverage, monitoring and using assessment to improve learning.	The reinforcement of these key features of effective curriculum delivery will be incorporated, as necessary, into WNCP documents as NL implements the curriculum, as well as any other resource material built around the new curriculum.
The Department of Education reinforce the value of homework, establish guidelines on the amount and type of homework to be	Guidelines as to the amount and type of homework are being developed by the department. These guidelines will then be distributed to teachers and will also be part of the professional

assigned, especially in the early gra develop and disseminate a parent homework.		development associated with the implementation of the new curriculum. As well, parent resources, currently under development, will be adjusted where necessary to reflect the new curriculum and will be a part of the introduction of the new curriculum.
Any revisions to the model for proviservices to special needs students opportunity for remedial work for the students requiring additional time to grade level expectations.	include ose	As the recommendations of the ISSP/Pathways review are implemented, the principle of remediation for students requiring additional support will be endorsed.
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