



**SOUTH SHORE REGIONAL SCHOOL BOARD  
CURRICULUM UPDATES & CONTACT INFORMATION  
Last updated: August 27<sup>th</sup>, 2014**

# MATHEMATICS

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## Curriculum Revision

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The P-12 Curriculum is currently under revision. The decision, as of March 2011, is that Nova Scotia will now move forward to adopt the Western and Northern Canadian Protocol (WNCP) math curriculum. For more information on the **WNCP Mathematics** curriculum that we are going to be adopting with minor changes from P-12, visit <http://www.wncp.ca/english/subjectarea/mathematics.aspx>. On the left, click on Mathematics then click directly below on Common Curriculum Framework then K-9 (May 2006) and 10-12 (January 2008) to look at the detailed math curriculums.

The intent is to ensure our curriculum is developmentally appropriate for our students, research-based, and manageable for teachers. A reduction in the number of outcomes at each grade level can ensure teachers take the time required for students to gain a greater depth of understanding. Implementation began in 2013-2014, starting with P-3 and Grade 10. Any teacher feedback is appreciated and can be sent to Gaston Comeau or Mark MacLeod.

The Western and Northern Canadian Protocol (WNCP) Mathematics Curriculum replaces the Atlantic Canada Mathematics Curriculum introduced in 1997. Teachers reported that they found the Atlantic Canada Mathematics curriculum unmanageable within the instructional time available for mathematics. The WNCP mathematics curriculum has fewer outcomes at each grade level. It focuses clearly on the most important things to learn at each grade level. Concepts are taught for **deeper understanding**, allowing teachers and students time to focus on the process rather than the product. A major focus of the new approach will be to teach through problem solving and provide opportunities for students to use personal strategies when doing computations.

Implementation Schedule	Grades			
Year 1 (2013–14)	Primary 1, 2, 3			10
Year 2 (2014–15)		4, 5, 6		11
Year 3 (2015–16)			7, 8, 9	12

## Contacts

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## Curriculum Guides

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If teachers have not yet downloaded the curriculum documents or Learning Outcomes Frameworks, they can be found (not all) in various stages (final, draft, conceptual, ..) on the **EduPortal**. \* **Curriculum guides for the new P-6, Grade 10-11, can be also found on the respective Mathematics Learning Commons Moodles (P-3, 4-6, 10 and 11-coming in Sept 2014).**

The DoE are now housing all the curriculum guides/documents in a one-stop place called the **EduPortal**. Check this central place out at <http://edapps.ednet.ns.ca/eduportal> You

will need your Employee Number as found on your payroll information to enter the site. Go to Resources and then Educator's Site to access the curriculum documents.

Besides updated curriculum guides, EduPortal also has easy access to other resources and links such as: the On-Line Video Library, upcoming events such as Webinars, Digital Video Library, EBSCO, Ednet Cloud, Education Media Library, Evaluation Services / Provincial Assessment info, FSL Program Services, IB Program, NSVS, NSSBB Online (ALR), ....

There may be old and new draft outcomes both on PowerSchool for subjects like Health P-9, Social Studies 5, etc. It is up to staff and principals to decide where they are in the implementation stage (usually a 3-year implementation for new curriculums). We encourage teachers to use the newer outcomes whenever possible, especially if there are support resources available (i.e. Health P-9).

## **INFORMATION ITEMS of Interest**

- ❖ **MATHEMATICS CONTESTS** Every year in Canada students from grades 2 to 12 have the opportunity to participate in mathematics contests. The main focus of mathematics contests is to stimulate interest in mathematics. These contests are an excellent way to provide students with a challenging and engaging mathematical experience that can be both competitive and educational. The format and structure vary from multiple-choice answers to essay questions to a team competition that emphasizes mathematical writing skills and effective group work. A collection of problems and solutions from previous years can usually be ordered from the sponsor of the contest. Teachers may also find some problems and solutions in databases posted on contest web sites. Using these materials to help students prepare for the contests is an exciting way to support the curriculum and help students to develop problem-solving strategies. Some teachers may prefer to use these contests to supplement classroom work, while others use them with their math clubs. Setting up some problem-solving displays is an effective way to engage students and parents during math fairs, open houses, or curriculum nights. Some contests are scored internally while others provide opportunity for interschool competitions in which students can compare their results with those of other students in the province or other parts of Canada. The contests are also a great tool to challenge our gifted and talented students who may be on an enrichment plan for mathematics. A

collection of problems and solutions from previous years can usually be ordered from the sponsor of the contest.

Below are some useful web sites and a list of the most popular contests with registration deadlines and competition dates. A link to the Nova Scotia Math Circles is also included.

Website	Annual Mathematics Contests
<a href="http://www.nsmathcircles.com">www.nsmathcircles.com</a>	Nova Scotia Math Circles—evening(s) of mathematical fun while exploring the wonder of numbers
<a href="http://www.cemc.uwaterloo.ca">www.cemc.uwaterloo.ca</a>	Gauss, Pascal, Cayley, Fermat, Fryer, Galois, Hypatia, Euclid, Canadian Senior and Intermediate Mathematics Contests, Canadian Team Mathematics Contest (in schools)
<a href="http://www.mathematicacentrum.ca">www.mathematicacentrum.ca</a>	Thales, Byron-Germain, Fibonacci, Pythagoras, Euler, Lagrange, Newton
<a href="http://www.cms.math.ca/Competitions">www.cms.math.ca/Competitions</a>	Sun Life Financial Canadian Open Math Challenge, Canadian Mathematical Olympiad
<a href="http://www.themathleague.com">www.themathleague.com</a>	The Math League
<a href="http://kangaroo.math.ca">http://kangaroo.math.ca</a>	Canadian Math Kangaroo Contest
<a href="http://purplecomet.org">http://purplecomet.org</a>	Purple Comet! Math Meet—free, on-line, international, team mathematics competition

- ❖ Recommended by the DoE as an engaging on-line math game using problem solving skills to challenge students <http://www.mitacs.ca/outreach/mathamaze>
- ❖ [www.nctm.org](http://www.nctm.org) -check it out for lesson plans, illuminations, latest app recommendations
- ❖ Autograph and SMART Math Tools software are on the school computers at all our high schools, including SSILC. Teachers can also get the software on their personal computer at home-this information was sent out to schools in June 2012.
- ❖ The latest version of Geometer’s Sketchpad is 5.04.
- ❖ Playing **games in mathematics**-it works! Check out <http://smartblogs.com/education/2014/04/24/when-are-we-ever-going-to-use-this/>

# Select a grade and/or category for more curriculum/course support & resources

[Grade Primary](#)

[Grade One](#)

[Grade Two](#)

[Grade Three](#)

[Grade Four](#)

[Grade Five](#)

[Grade Six](#)

[Grade Seven](#)

[Grade Eight](#)

[Grade Nine](#)

[Grade Ten](#)

[Mathematics 10](#)

[Mathematics at Work 10](#)

[Mathematics Essentials 10](#)

[Grade Eleven](#)

[Mathematics 11](#)

[Pre-calculus 11](#)

[Mathematics at Work 11](#)

[Mathematics Essentials 11](#)

[Grade Twelve](#)

[Mathematics 12](#)

[Advanced Mathematics 12](#)

[Pre-Calculus Mathematics 12](#)

[Calculus 12](#)

[Math for the Workplace 12](#)

[Mathematics Foundations 12](#)

## **Grade Primary (2013-2014 / Year #1 of Implementation of WNCP curriculum with some adaptations)**

### **Provincial Guide**

- Mathematics Primary Curriculum Document (May 2013 Draft)
- Mathematics Primary Yearly Plan (Draft June 2013)
- The Time to Learn Strategy requirement is a minimum of 45 minutes per day for grades P-2, one hour for grades 3-6 and a minimum of 5 minutes per day for mental math and estimation for grades 1-6

### **Core Resources**

- Math Makes Sense Primary (Pearson)-a classroom resource package that includes a printed Big Book, and a Projectable Big e-book CD; Teacher Resource Guide (print and CD); Primary Audio CD.
- All P-3 classroom teachers now have access (June 2013) to the **Mathematics Learning Commons P-3 Moodle**. Teachers can log in at <http://nsvs.ednet.ns.ca> using the first time enrollment key and their ednet username and password. All P-3 curriculum guides and related support documents (i.e. yearly, unit plans, professional learning videos, Origo Videos, Numeracy Nets K-3, Power Point for Curriculum Night, Let's Talk About .. pamphlets, ALR resources,..) are hosted on the Moodle. Teachers received instructions on how to access the Moodle and to enroll in the Mathematics Learning Commons Primary-3. Contact Gaston if you need further assistance.
- Teachers and students will also have access to Pearson Education's Virtual Manipulatives link. This is a license for 7 years. Implementation Matters is also a web-based support with 10-minute videos that are meant to be viewed in small groups. This will be great way to structure the planned PLC time related to the new mathematics curriculum P to 3.

## **Grade 1 (2013-2014 / Year #1 of Implementation of WNCP curriculum with some adaptations)**

### **Provincial Guide**

- Mathematics 1 Curriculum Document (May 2013 Draft)
- Mathematics 1 Yearly Plan (Draft June 2013)
- The Time to Learn Strategy requirement is a minimum of 45 minutes per day for grades P-2, one hour for grades 3-6 and a minimum of 5 minutes per day for mental math and estimation for grades 1-6

### **Core Resources**

- Math Makes Sense Primary (Pearson)-a classroom resource package that includes a printed Big Book, and a Projectable Big e-book; Teacher Resource Guide (print and CD); Student E- Book (print reproducible masters and CD); Grade 1 Audio CD.

- All P-3 classroom teachers now have access (June 2013) to the **Mathematics Learning Commons P-3 Moodle**. Teachers can log in at <http://nsvs.ednet.ns.ca> using the first time enrollment key and their ednet username and password. All P-3 curriculum guides and related support documents (i.e. yearly, unit plans, professional learning videos, Origo Videos, Numeracy Nets K-3, Power Point for Curriculum Night, Let's Talk About .. pamphlets, ALR resources,..) are hosted on the Moodle. Teachers received instructions on how to access the Moodle and to enroll in the Mathematics Learning Commons Primary-3. Contact Gaston if you need further assistance.
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## Grade 2

### (2013-2014 / Year #1 of Implementation of WNCB curriculum with some adaptations)

#### Provincial Guide

- Mathematics 2 Curriculum Document (May 2013 Draft)
- Mathematics 2 Yearly Plan (Draft June 2013)
- The Time to Learn Strategy requirement is a minimum of 45 minutes per day for grades P-2, one hour for grades 3-6 and a minimum of 5 minutes per day for mental math and estimation for grades 1-6

#### Core Resources

- Math Makes Sense Primary (Pearson)-a classroom resource package that includes a printed Big Book, and a Projectable Big e-book; Teacher Resource Guide (print and CD); Student E- Book (print reproducible masters and CD); Grade 2 Audio CD.
- All P-3 classroom teachers now have access (June 2013) to the **Mathematics Learning Commons P-3 Moodle**. Teachers can log in at <http://nsvs.ednet.ns.ca> using the first time enrollment key and their ednet username and password. All P-3 curriculum guides and related support documents (i.e. yearly, unit plans, professional learning videos, Origo Videos, Numeracy Nets K-3, Power Point for Curriculum Night, Let's Talk About .. pamphlets, ALR resources,..) are hosted on the Moodle. Teachers received instructions on how to access the Moodle and to enroll in the Mathematics Learning Commons Primary-3. Contact Gaston if you need further assistance.
- Teachers and students will also have access to Pearson Education's Virtual Manipulatives link. This is a license for 7 years. Implementation Matters is also a web-based support with 10-minute videos that are meant to be viewed in small groups. This will be great way to structure the planned PLC time related to the new mathematics curriculum P to 3.

## Grade 3

### (2013-2014 / Year #1 of Implementation of WNCP curriculum with some adaptations)

#### Provincial Guide

- Mathematics 3 Curriculum Document (May 2013 Draft)
- Mathematics 3 Yearly Plan (Draft June 2013)
- The Time to Learn Strategy requirement is a minimum of 45 minutes per day for grades P-2, one hour for grades 3-6 and a minimum of 5 minutes per day for mental math and estimation for grades 1-6

#### Core Resources

- Math Makes Sense 3 Teacher ProGuide (print and CD)
- Math Makes Sense 3 Student Edition (print)
- Math Makes Sense 3 Student e-Text
- All P-3 classroom teachers now have access (June 2013) to the **Mathematics Learning Commons P-3 Moodle**. Teachers can log in at <http://nsvs.ednet.ns.ca> using the first time enrollment key and their ednet username and password. All P-3 curriculum guides and related support documents (i.e. yearly, unit plans, professional learning videos, Origo Videos, Numeracy Nets K-3, Power Point for Curriculum Night, Let's Talk About .. pamphlets, ALR resources,..) are hosted on the Moodle. Teachers received instructions on how to access the Moodle and to enroll in the Mathematics Learning Commons Primary-3. Contact Gaston if you need further assistance.
- Teachers and students will also have access to Pearson Education's Virtual Manipulatives link. This is a license for 7 years. Implementation Matters is also a web-based support with 10-minute videos that are meant to be viewed in small groups. This will be great way to structure the planned PLC time related to the new mathematics curriculum P to 3.
- Leaps and Bounds Student and Teacher Resource-this resource was distributed to each teacher in CD format in April, 2013. Most of the Resource teachers working with Primary to Grade 3 students have recently attended a one-day in-service on the **Leaps and Bounds** Mathematics diagnostic and intervention resource. The goals of the workshop were to understand whom the resource is intended for, how it works to support struggling students and how it aligns with the new Nova Scotia Mathematics curriculum P to 3. The grades 3-4 Leaps and Bounds student and teacher resources will be posted on the P-3 Learning Commons Mathematic Moodle shortly.

## Grade 4

**The new Grade 4 WNCP curriculum will begin implementation in 2014-2015. Teachers received Common Messaging PD in Sept 2013 and were invited to an Implementation Workshop on June 25, 2014 or August 28, 2014.**



## Provincial Guide

- Mathematics 4 (Implementation Draft, July 2014). The curriculum document for Mathematics 4 will be delivered to schools during the week of September 15, 2014. In the interim, teachers may access all curriculum documents electronically on the Mathematics Learning Commons 4-6 on Moodle. If you require an enrollment key to access the Moodle, please contact **Gaston or Mark**. Teachers should not print the curriculum documents, as print copies will arrive at schools in the near future.
- Mathematics 4 Yearly Plan (Draft June 2014)
- The Time to Learn Strategy requirement is a minimum of 45 minutes per day for grades P-2, one hour for grades 3-6 and a minimum of 5 minutes per day for mental math and estimation for grades 1-6

## Core Resources

- Math Makes Sense 4 Teacher ProGuide (print and CD)
- Math Makes Sense 4 Student Text (print)
- All 4-6 classroom teachers now have access (June 2014) to the **Mathematics Learning Commons 4-6 Moodle**. Teachers can log in at <http://nsvs.ednet.ns.ca> using the first time enrollment key and their ednet username and password. All 4-6 curriculum guides and related support documents (i.e. yearly, unit plans, professional learning videos, Origo Videos, Numeracy Nets 4, Power Point for Curriculum Night, Let's Talk About .. pamphlets, ALR resources,..) are hosted on the Moodle. Teachers received instructions on how to access the Moodle and to enroll in the Mathematics Learning Commons 4-6. Contact Gaston if you need further assistance.
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- Check out Census at School, an international Web-based classroom activity for students, at [www.censusatschool.ca](http://www.censusatschool.ca) Ties in nicely with the Data Management outcomes. Even more Statistics Canada learning resources at [www.statcan.gc.ca/learningresources](http://www.statcan.gc.ca/learningresources) for mathematics and other subjects.
- Performance Levels 1-4, Strand by Strand (i.e. Number) levels (at or above or requires attention) and Cognitive Levels (1,2,3)- (at or above or requires attention) are reported on each of the **Mathematics 4, 6 and 8 Provincial Assessments by individual student. These were** sent out to schools. The report also compares how your school did on each assessment in relation to our Board and Provincial averages. These would be very helpful for math team PLC discussions, etc

- The 2014-2015 Mathematics in Grade 4 assessment, administered in late September 2014, will be the first measure of student learning under the WNCP Math curriculum.
- Grade 4 Math Assessment resources <http://plans.ednet.ns.ca/grade4> September 22-October 3, 2014

## Grade 5

**The new Grade 4 WNCP curriculum will begin implementation in 2014-2015. Teachers received Common Messaging PD in Sept 2013 and were invited to an Implementation Workshop on June 25, 2014 or August 28, 2014.**

### Provincial Guide

- Mathematics 5 (Implementation Draft, July 2014). The curriculum document for Mathematics 5 will be delivered to schools during the week of September 15, 2014. In the interim, teachers may access all curriculum documents electronically on the Mathematics Learning Commons 4-6 on Moodle. If you require an enrollment key to access the Moodle, please contact **Gaston or Mark**. Teachers should not print the curriculum documents, as print copies will arrive at schools in the near future.
- Mathematics 5 Yearly Plan (Draft June 2014)
- The Time to Learn Strategy requirement is a minimum of 45 minutes per day for grades P-2, one hour for grades 3-6 and a minimum of 5 minutes per day for mental math and estimation for grades 1-6

### Core Resources

- Math Makes Sense 5 Teacher ProGuide (print and CD)
- Math Makes Sense 5 Student Text (print)
- All 4-6 classroom teachers now have access (June 2014) to the **Mathematics Learning Commons 4-6 Moodle**. Teachers can log in at <http://nsvs.ednet.ns.ca> using the first time enrollment key and their ednet username and password. All 4-6 curriculum guides and related support documents (i.e. yearly, unit plans, professional learning videos, Origo Videos, Numeracy Nets 4, Power Point for Curriculum Night, Let's Talk About .. pamphlets, ALR resources,..) are hosted on the Moodle. Teachers received instructions on how to access the Moodle and to enroll in the Mathematics Learning Commons 4-6. Contact Gaston if you need further assistance.
- Check out Census at School, an international Web-based classroom activity for students, at [www.censusatschool.ca](http://www.censusatschool.ca) Ties in nicely with the Data Management outcomes. Even more Statistics Canada learning resources at [www.statcan.gc.ca/learningresources](http://www.statcan.gc.ca/learningresources) for mathematics and other subjects.

## Grade 6

**The new Grade 4 WNCP curriculum will begin implementation in 2014-2015. Teachers received Common Messaging PD in Sept 2013 and were invited to an Implementation Workshop on June 26, 2014 or August 28, 2014.**

### Provincial Guide

- Mathematics 6 (**expected soon-Sept 2014**). The curriculum document for Mathematics 6 will be delivered to schools by late September 2014. In the interim, teachers may access all curriculum documents electronically on the Mathematics Learning Commons 4-6 on Moodle. If you require an enrollment key to access the Moodle, please contact **Gaston or Mark**. Teachers should not print the curriculum documents, as print copies will arrive at schools in the near future.
- Mathematics 6 Yearly Plan (Draft June 2014)
- The Time to Learn Strategy requirement is a minimum of 45 minutes per day for grades P-2, one hour for grades 3-6 and a minimum of 5 minutes per day for mental math and estimation for grades 1-6

### Core Resources

- Math Makes Sense 6 Teacher ProGuide (print and CD)
- Math Makes Sense 6 Student Text (print)
- All 4-6 classroom teachers now have access (June 2014) to the **Mathematics Learning Commons 4-6 Moodle**. Teachers can log in at <http://nsvs.ednet.ns.ca> using the first time enrollment key and their ednet username and password. All 4-6 curriculum guides and related support documents (i.e. yearly, unit plans, professional learning videos, Origo Videos, Numeracy Nets 4, Power Point for Curriculum Night, Let's Talk About .. pamphlets, ALR resources,..) are hosted on the Moodle. Teachers received instructions on how to access the Moodle and to enroll in the Mathematics Learning Commons 4-6. Contact Gaston if you need further assistance.
- Mathematics 6 Curriculum Project (2004/Mark MacLeod)
- Check out Census at School, an international Web-based classroom activity for students, at [www.censusatschool.ca](http://www.censusatschool.ca) Ties in nicely with the Data Management outcomes. Even more Statistics Canada learning resources at [www.statcan.gc.ca/learningresources](http://www.statcan.gc.ca/learningresources) for mathematics and other subjects.
- Performance Levels 1-4, Strand by Strand (i.e. Number) levels (at or above or requires attention) and Cognitive Levels (1,2,3)- (at or above or requires attention) are reported on each of the **Mathematics 4, 6 and 8 Provincial Assessments by individual student. These were** sent out to schools. The report also compares how your school did on each assessment in relation to our Board and Provincial averages. These would be very helpful for math team PLC discussions, etc
- Grade 6 Math Assessment resources <http://plans.ednet.ns.ca/grade6> Sept 22-Oct 3, 2014.

## Grade 7

There will be a new mathematics curriculum implemented in grades 7–9 in September 2015. To facilitate the implementation of the new Mathematics 8 curriculum, a Mathematics 7 transition yearly plan has been created for all Mathematics 7 teachers to use during the upcoming 2014–2015 school year. The **Mathematics 7** Transition yearly plan was sent out to teachers prior to the last week of June 2014. There will be one day of PD in our September Regional In-service to go over this yearly plan and the new material it contains. Teachers are expected to follow the yearly plan that was sent out and thus start with the Number Sense/Chapter 1 unit that has no changes from the current APEF outcomes. There are outcomes in the current Grade 7 APEF that can be left out because they will be covered in Grade 8 the following year, in 2015-16, and also some outcomes that will need to be added to the current Grade 7. This is similar to the Grade 9 transition piece that we did last year. Teachers will recognize that much of the content in this transitional yearly plan is the same as their current APEF Mathematics 7 program (80%). However content that is moving to another grade or will no longer be part of the mathematics curriculum after September 2015 is not an expectation in this transitional yearly plan and is shown with a strike through. Some content has been added where it is necessary to close the gaps mentioned above. This content is from the new WNCPC Mathematics 7 curriculum that will be implemented in September 2015. It is identified in the transitional yearly plan as (NEW).

Please Note: The current resource, Mathematics 7: Focus on Understanding, will still be the main student resource. Where there is new content, material will be provided and will be placed on the Mathematics Learning Commons 7–9 Moodle inside the Mathematics 7 (2014–2015) link. Teachers, via principals, were sent the two attachments (Yearly Plan–both English & French & Moodle Access) to share with those who will be teaching Mathematics 7 in Sept 2014. If you have any questions about this yearly plan and its intended use, please contact Mark. Please note that the French translation is also available.

### Provincial Guide

- Atlantic Canada Mathematics Curriculum: Grade 7 (1999) **in conjunction with the Mathematics 7, Transition Yearly Plan, 2014-2015**
- The Time to Learn Strategy requires a minimum of 60 minutes per day for grade 7

### Core Resources

- Math 7: Focus on Understanding (Student Text & TR)-100% match to SCO's
- Mathematics Grade 7: "A Teaching Resource" to supplement the Guide with suggested yearly plans (2005; revised and reprinted 2010)
- A Moodle now exists for teachers to access for Mathematics 7-9. Go to <http://nsvs.ednet.ns.ca> and use your staff ednet (tsmith portion) and your password then go to top menu and click on Educators then drop down and click on Professional Learning then drop down and click on Provincial Teacher Communities of Practice then click on Mathematics and then click Mathematics Learning Commons 7-9. Enrollment key can be accessed through Mark (*use just once*). Once you have been in to the site once, the next

time you log in, you can just go to My Courses on the left and click on Mathematics Learning Commons 7-9 and away you go!

- This one-stop shopping Grade 7-9 Math Moodle contains access to the following APEF resources: Math Curriculum Guides, the “A Teaching Resource” documents, Yearly Plans, Videos, assessment materials, Mental Math Booklets, Item Bank, link to Provincial Assessments/resources, recommended ALR resources, Home-School Communication: Grades 7-9 Resource, and even a Forum to chat with other math teachers along with a variety of other links. **The Moodle will be updating on a regular basis in early 2015 with the new revised WNCP Grade 8 curriculum and related resources.**
- Looking for quality assessment items for tests, quizzes, student discussions, etc. Check out the Grades 7-12 Item Bank at <http://itembank.ednet.ns.ca>. A Login ID and Password are required to access this site. You can obtain this from the Department of Education, at 424-4258 or by emailing [itembank@gov.ns.ca](mailto:itembank@gov.ns.ca).
- Mental Math series of 16 short videos which highlights different classrooms and grade levels (1-9) as it demonstrates the various strategies of Mental Math within a curricular context <http://dvl.ednet.ns.ca/mental-math>
- Check out Census at School, an international Web-based classroom activity for students, at [www.censusatschool.ca](http://www.censusatschool.ca) Ties in nicely with the Data Management outcomes. Even more Statistics Canada learning resources at [www.statcan.gc.ca/learningresources](http://www.statcan.gc.ca/learningresources) for mathematics and other subjects.

## Grade 8

**The new Grade 8 WNCP curriculum will begin implementation in 2015-2016. For 2014-2015, the APEF Grade 8 curriculum will remain the same.**

### Provincial Guide

- Atlantic Canada Mathematics Curriculum: Grade 8 (1999)
- The Time to Learn Strategy requires a minimum of 60 minutes per day for grade 8

### Core Resources

- Math 8: Focus on Understanding (Student Text & TR)-100% match to SCO's
- Mathematics Grade 8: “A Teaching Resource” to supplement the Guide with suggested yearly plans (2005)
- A Moodle now exists for teachers to access for Mathematics 7-9. Go to <http://nsvs.ednet.ns.ca> and use your staff ednet (tsmith portion) and your password then go to top menu and click on Educators then drop down and click on Professional Learning then drop down and click on Provincial Teacher Communities of Practice then click on Mathematics and then click Mathematics Learning Commons 7-9. Enrollment key can be accessed through Mark (*use just once*). Once you have been in to the site once, the next

time you log in, you can just go to My Courses on the left and click on Mathematics Learning Commons 7-9 and away you go!

- This one-stop shopping Grade 7-9 Math Moodle contains access to the following APEF resources: Math Curriculum Guides, the “A Teaching Resource” documents, Yearly Plans, Videos, assessment materials, Mental Math Booklets, Item Bank, link to Provincial Assessments/resources, recommended ALR resources, Home-School Communication: Grades 7-9 Resource, and even a Forum to chat with other math teachers along with a variety of other links. **The Moodle will be updating on a regular basis in early 2015 with the new revised WNCP Grade 8 curriculum and related resources.**
- Looking for quality assessment items for tests, quizzes, student discussions, etc. Check out the Grades 7-12 Item Bank at <http://itembank.ednet.ns.ca>. A Login ID and Password are required to access this site. You can obtain this from the Department of Education, at 424-4258 or by emailing [itembank@gov.ns.ca](mailto:itembank@gov.ns.ca).
- Mental Math series of 16 short videos which highlights different classrooms and grade levels (1-9) as it demonstrates the various strategies of Mental Math within a curricular context <http://dvl.ednet.ns.ca/mental-math>
- Each teacher that attended the Math 8 workshop on Thursday, September 22<sup>nd</sup>, 2011 received a USB memory stick with all the Grade 8 Math support materials, including 4 sample yearly plans, and documents that are required for Grade 8 Math-extra copies are available through Mark.
- The DoE completed the process of developing material for the Grade 8 Mathematics Assessment. The assessment items were developed by current math teachers, reviewed by and Advisory group (Sharon Knickle from HA and Kendra Hall from BHS were our members of the team) and were field-tested in early October 2011. The assessment will be comprised of mostly multiple-choice items and may include some open-ended questions where students will bubble in their answer. Determination of question format will be made after the field test. A release of practice items in all question formats was made available early in 2012. Items were developed based on the Nova Scotia Grade 7 and 8 Mathematics Curriculum Guide and the Grade 8 Mathematics Resource: Focus on Understanding. The Table of Specifications is as follows: GCO's A & B / Number = 35-40%; GCO B / Patterns & Relations = 15-20%; GCO D / Measurement = 15-20%; GCO E / Geometry = 15-20%; GCO F / Data Management = 5-10%; GCO G / Probability = 5%.
- On Friday, March 2<sup>nd</sup>, 2012, all teachers who teach Grade 8 Mathematics, including teachers who teach Grade 8 Mathematics en Français (BHS, SQ's, HA), were invited to attend a PD session focusing solely on the new Grade 8 Mathematics Assessment which will be written for the 1<sup>st</sup> time on June 5-6, 2012 in our schools. The workshop looked at the process/table of specifications; level of questions; exemplars/sample mock questions; field tested questions; areas of difficulty concluded from the field-tested questions; and a Q & A all in relation to the new Grade 8 Mathematics Assessment.

Marthe Craig (DoE Evaluation Services), along with Mark MacLeod and Gaston Comeau provided the In-service.

- RWM Grade 8 Math Assessment resources <http://plans.ednet.ns.ca/grade8> May 25-June 5, 2014.
- Performance Levels 1-4, Strand by Strand (i.e. Number) levels (at or above or requires attention) and Cognitive Levels (1,2,3)- (at or above or requires attention) are reported on each of the **Mathematics 4, 6 and 8 Provincial Assessments by individual student. These were** sent out to schools. The report also compares how your school did on each assessment in relation to our Board and Provincial averages. These would be very helpful for math team PLC discussions, etc
- Check out Census at School, an international Web-based classroom activity for students, at [www.censusatschool.ca](http://www.censusatschool.ca) Ties in nicely with the Data Management outcomes. Even more Statistics Canada learning resources at [www.statcan.gc.ca/learningresources](http://www.statcan.gc.ca/learningresources) for mathematics and other subjects.

## Grade 9

### **The new Grade 9 WNCP curriculum will begin implementation in 2015-2016.**

\*\*Mark met with Grade 9 teachers, GC's and Admin during January 2013 to discuss the effects that the new Grade 10 Math courses will have on the current **Grade 9 Mathematics** course in terms of SCO's and placement into Grade 10 Math courses.

### **Grade 9 Atlantic Canada Mathematics Outcomes Document**

#### **-correlated to Grade 10 Mathematics courses to be offered beginning in 2013-2014**

The document/chart identifies which grade 9 mathematics outcomes will prepare students for the indicated grade 10 mathematics course. Grade 9 teachers will find this chart helpful in reducing the SCO's that need to be addressed in the current Grade 9 curriculum (min 16 less SCO's) and in advising students about which grade 10 mathematics course is best suited for them.

### **Provincial Guide**

- Atlantic Canada Mathematics Curriculum: Grade 9 (2000) **in conjunction with the Grade 9 Atlantic Canada Mathematics Outcomes Document.**
- The Time to Learn Strategy requires a minimum of 60 minutes per day for grade 9

### **Core Resources**

- Math 9: Focus on Understanding (Student Text & TR)-100% match to SCO's
- Mathematics Grade 9: "A Teaching Resource" to supplement the Guide with suggested yearly plans (2005)
- A Moodle now exists for teachers to access for Mathematics 7-9. Go to <http://nsvs.ednet.ns.ca> and use your staff ednet (tsmith portion) and your password then go to top menu and click on Educators then drop down and click on Professional Learning then drop down and click on Provincial Teacher Communities of Practice then click on Mathematics and then click

Mathematics Learning Commons 7-9. Enrollment key can be accessed through Mark (*use just once*). Once you have been in to the site once, the next time you log in, you can just go to My Courses on the left and click on Mathematics Learning Commons 7-9 and away you go!

- This one-stop shopping Grade 7-9 Math Moodle contains access to the following APEF resources: Math Curriculum Guides, the “A Teaching Resource” documents, Yearly Plans, Videos, assessment materials, Mental Math Booklets, Item Bank, link to Provincial Assessments/resources, recommended ALR resources, Home-School Communication: Grades 7-9 Resource, and even a Forum to chat with other math teachers along with a variety of other links. **The Moodle will be updating on a regular basis in early 2015 with the new revised WNCP Grade 8 curriculum and related resources.**
- Looking for quality assessment items for tests, quizzes, student discussions, etc. Check out the Grades 7-12 Item Bank at <http://itembank.ednet.ns.ca>. A Login ID and Password are required to access this site. You can obtain this from the Department of Education, at 424-4258 or by emailing [itembank@gov.ns.ca](mailto:itembank@gov.ns.ca).
- Mental Math series of 16 short videos which highlights different classrooms and grade levels (1-9) as it demonstrates the various strategies of Mental Math within a curricular context <http://dvl.ednet.ns.ca/mental-math>
- Each grade 9 Mathematics classroom received a class set of Alge-tiles (March 2011)
- Our High School Math Advisory group, met on Wednesday, March 23<sup>rd</sup>, 2011, and developed a Placement Document that will help in our students choosing high school math courses that they can be successful in consultation with their teacher, Guidance Counselor and parents. These documents were being used beginning in the 2011-2012 school year.
- Check out Census at School, an international Web-based classroom activity for students, at [www.censusatschool.ca](http://www.censusatschool.ca) Ties in nicely with the Data Management outcomes. Even more Statistics Canada learning resources at [www.statcan.gc.ca/learningresources](http://www.statcan.gc.ca/learningresources) for mathematics and other subjects.

## **Grade 10**

### **(2013-2014 / Year #1 of Implementation of WNCP curriculum with some adaptations for Mathematics 10 and Mathematics at Work 10)**

**Senior High Mathematics: Common Pathways** A diagram that illustrates likely course pathways for senior high mathematics. Grade 10 courses will be implemented in 2013-2014, grade 11 courses in 2014-2015, and grade 12 courses in 2015-2016. The Mathematics Essentials pathway, which is currently available as part of the Public School Programs, will continue.



Provincial examinations for grade 10 mathematics students (Mathematics at Work 10, Mathematics 10) will be administered as pilots in 2013–2014; school, board, and provincial results will not be generated for this initial year of these new courses. The first results for these examinations will be made available in September 2015, based on examinations written in January and June 2015.

Mathematics Pre-IB 10 will be two semesters long, a minimum of 220 instructional hours, and will address both the Mathematics 10 curriculum outcomes and the additional curriculum outcomes (sent to schools / PVEC in Nov 2013). All students enrolled in Mathematics Pre-IB 10 will write the NS Mathematics 10 examination in June.

### **Mathematics 10 (Academic) MT10**

**Prerequisite:** Successful completion of Mathematics 9 and demonstrated good to excellent performance in relation to the expected learning outcomes prescribed for Mathematics 9.

**The new Mathematics 10 course will be a 220-hour year-long academic course. Successful completion will result in two mathematics credits—one of these is an eligible credit for the two mathematics credits required for graduation. The other credit is an eligible credit for the “two others from mathematics, science, and/or technology.**

#### **Provincial Guide**

- Mathematics 10 Curriculum Document (Draft, July 2013)
- Yearly Plan (Draft June 2014)
- An IPP code refers to the grade level at which the student requires an IPP for mathematics, not to the specific classroom in which a student who requires an IPP is placed.

#### **Core Resources**

- Teacher Technology Resource (DvD)-includes the Teacher Resource
- Mathematics 10 Student Edition (print)-Pearson
- Mathematics 10 Student Web-based e-Book-Pearson
- Extra Practice & Exam view Test Generator (CD)-Pearson
- Solutions (CD)-complete solutions to questions found in the Student Edition-Pearson
- Financial Mathematics Student Edition (print and PDF files)-McGraw Hill
- Financial Mathematics Teacher Resource (print and CD)-McGraw Hill
- The DoE have listed a supplementary resource from McGraw Hill for Mathematics 10 entitled Mathematics 10 Enriched. This resource is available for purchase through the NS ALR / book bureau. This is not a core resource, but is a supplementary resource intended to enhance the 220-hour course for students who would like additional enriched learning. Attached both the link to the student and teacher resources and the information to the ALR <http://www.mcgrawhill.ca/school/explore/1259021998/western+canadian+mathematics+10+enriched/>

- All of the above plus more (Yearly Plan, Assessment, Multi-Media tutorials, webinars, Power Point for Curriculum Night, ALR resources, ..) may also be accessed through the Mathematics Learning Commons Grade 10 Moodle. Teachers received instructions on how to access the Moodle and to enroll in the **Mathematics Learning Commons Grade 10 Moodle**. Contact Mark if you need further assistance.
- Engaging site of resources for teachers to use with students site-a repository of engaging activities linked to the WNCP High School Math Curriculum, which suggests that teachers should “orchestrate the experiences” from which students extract meaning-thanks to Joe MacDonald for sharing! Reminds me of the NCTM Illuminations site. Videos from Dan Meyer and awesome performance assessments like the Tin Can project and much more! Check it out at <http://wncpactivemath.wordpress.com/>
- A provincial license of Autograph v3.3 has been purchased for all high schools, including Adult High Schools. This provides unlimited access to this software at all high school sites. Two support resources: Autograph Activities: Teacher Demonstrations and Autograph Activities: Student Investigations will also be sent out (March 2011)
- Our High School Math Advisory group, met on Wednesday, March 23<sup>rd</sup>, 2011, and developed a Placement Document that will help in our students choosing high school math courses that they can be successful in consultation with their teacher, Guidance Counselor and parents. These documents were being used beginning in the 2011-2012 school year.
- Looking for quality assessment items for tests, quizzes, student discussions, etc. Check out the Grades 7-12 Item Bank at <http://itembank.ednet.ns.ca>. A Login ID and Password are required to access this site. You can obtain this from the Department of Education, at 424-4258 or by emailing [itembank@gov.ns.ca](mailto:itembank@gov.ns.ca). Questions from the **Item Bank** will be realigned with the new courses and posted to the appropriate Moodle when completed.
- David Pilmer has developed a series of Mathematics 49 videos for the NSCC Adult Learning Program (ALP). Topics include Sinusoidal Functions, Quadratic Functions, Systems of Equations and more. To view the videos visit the website <http://www.youtube.com/watch?v=eaG4px5o5vs>
- NSE resources <http://plans.ednet.ns.ca/m10m10w> June 19<sup>th</sup>, 2015.

### **Mathematics at Work 10 (Academic) MTW10**

**Prerequisite:** Successful completion of Mathematics 9 and demonstrated good to excellent performance in relation to the expected learning outcomes prescribed for Mathematics 9.

**The new Mathematics at Work 10 course will be a 110-hour course. Successful completion will result on one graduation credit, eligible for the mathematics graduation requirement.**

### **Provincial Guide**

- Mathematics at Work 10 Curriculum Document (Draft, August 2013)
- Yearly Plan (Draft June 2014)
- An IPP code refers to the grade level at which the student requires an IPP for mathematics, not to the specific classroom in which a student who requires an IPP is placed.

### **Core Resources**

- Mathematics at Work Student Edition (print and PDF files)
- Mathematics at Work Teacher Edition (print and CD)
- Exercise and Homework Book (print)
- All of the above plus more (Yearly Plan, Assessment, Multi-Media tutorials, webinars, Power Point for Curriculum Night, ALR resources, ..) may also be accessed through the Mathematics Learning Commons Grade 10 Moodle. Teachers received instructions on how to access the Moodle and to enroll in the **Mathematics Learning Commons Grade 10 Moodle**. Contact Mark if you need further assistance.
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- NSE resources <http://plans.ednet.ns.ca/m10m10w> January 27<sup>th</sup>, 2015; June 19<sup>th</sup>, 2015.

## **Mathematics Essentials 10 (Grad) MTHE10**

**Prerequisite:** Successful completion of Math 8 and recommendation from their Mathematics 9 teacher

### **Provincial Guide**

- Mathematics Essentials 10 (Draft 2005).

### **Core Resources**

- Mathematics for Everyday Life 10 Student Text / Teacher's Resource
- The City - an exciting resource for teaching financial management. Check it out at <http://www.themoneybelt.gc.ca>. Mark MacLeod and Jeff Rhodenizer (BHS) have been trained using this resource.
- [http://lrt.ednet.ns.ca/PD/HS\\_Math\\_Website/High\\_School\\_Math.html](http://lrt.ednet.ns.ca/PD/HS_Math_Website/High_School_Math.html)
- A provincial license of Autograph v3.3 has been purchased for all high schools, including Adult High Schools. This provides unlimited access to this software at all high school sites. Two support resources: Autograph Activities: Teacher Demonstrations and Autograph Activities: Student Investigations will also be sent out (March 2011)
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- Looking for quality assessment items for tests, quizzes, student discussions, etc. Check out the Grades 7-12 Item Bank at <http://itembank.ednet.ns.ca>. A Login ID and Password are required to access this site. You can obtain this from the Department of Education, at 424-4258 or by emailing [itembank@gov.ns.ca](mailto:itembank@gov.ns.ca). Questions from the **Item Bank** will be realigned with the new courses and posted to the appropriate Moodle when completed.

## **Grade 11**

**The new Grade 11 WNCP curriculums for Mathematics at Work 11, Mathematics 11 and Pre-calculus 11 will begin implementation in 2014-2015. Teachers received PD on these three courses on June 4-5, 2014 with some follow-up at the Sept 2014 Regional In-service.**

## **Mathematics 11 (Academic) MT11**

**Prerequisite:** Successful completion of Mathematics 10

### **Provincial Guide**

- Mathematics 11 Curriculum (Implementation Draft July 2014). Curriculum documents for Mathematics 11 will be distributed to schools in September 2014.
- Yearly Plan (Draft March 2014)
- IPP code is MTH11IP / 008109. The code refers to the grade level at which the student requires an IPP for mathematics, not to the specific classroom in which a student who requires an IPP is placed.

## Core Resources

- Mathematics 11: Foundations of Mathematics 11 (Nelson), Student Text (print with e-book access when Moodle opens in Sept). Students and teachers can access the digital PDF files of the text book from OurCloud at <http://goo.gl/4oY1Ww>  
The password to enter this folder is: MA11
- Mathematics 11: Foundations of Mathematics 11 (Nelson), 3-in-1 Teacher's Guide with CD and IWB activities. Digital version in the Fall and on the Moodle.
- Mathematics 11: Foundations of Mathematics 11 (Nelson), Assessment Bank (CD). **Please Note:** Foundations of Mathematics 11 WNCPC Computerized Assessment Bank: At the present time, this CD cannot be loaded on the same computer that also has installed the Exam View Test Generator for Mathematics 10. It is because the two versions of the Examview software are different. A video is being created to explain the steps that need to be followed to install both on the same computer. It will be posted on the Moodle as soon as it becomes available.
- Mathematics 11: Foundations of Mathematics 11 (Nelson), Solutions Manual (CD)
- The new **Mathematics Learning Commons Grade 11 Moodle** site for the three new courses (Mathematics at Work 11, Mathematics 11 and Pre-calculus 11) became live in late August 2014 and instructions for access to this Moodle was sent to schools at this time-contact Mark if you need assistance. In the meantime, the OurCloud repository for **grade 11 mathematics** will remain until January 2015. Documents will be added to the Moodle as they become available-yearly plans and draft curriculum guides for all three courses, Mathematics at Work 11, Mathematics 11, and Pre-calculus 11 are currently on there.
- Engaging site of resources for teachers to use with students site-a repository of engaging activities linked to the WNCPC High School Math Curriculum, which suggests that teachers should "orchestrate the experiences" from which students extract meaning-thanks to Joe MacDonald for sharing! Reminds me of the NCTM Illuminations site. Videos from Dan Meyer and awesome performance assessments like the Tin Can project and much more! Check it out at <http://wncpactivemath.wordpress.com/>
- A provincial license of Autograph v3.3 has been purchased for all high schools, including Adult High Schools. This provides unlimited access to this software at all high school sites. Two support resources: Autograph Activities: Teacher Demonstrations and Autograph Activities: Student Investigations will also be sent out (March 2011)
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- David Pilmer has developed a series of Mathematics 49 videos for the NSCC Adult Learning Program (ALP). Topics include Sinusoidal Functions, Quadratic Functions, Systems of Equations and more. To view the videos visit the website <http://www.youtube.com/watch?v=eaG4px5o5vs>

- Looking for quality assessment items for tests, quizzes, student discussions, etc. Check out the Grades 7-12 Item Bank at <http://itembank.ednet.ns.ca>. A Login ID and Password are required to access this site. You can obtain this from the Department of Education, at 424-4258 or by emailing [itembank@gov.ns.ca](mailto:itembank@gov.ns.ca). Questions from the **Item Bank** will be realigned with the new courses and posted to the appropriate Moodle when completed.
- Student Workbooks for the APEF Mathematics curriculum of Math 10, 11, and 12 from a teacher in NFLD is a resource available to our high school math teachers. The workbooks contain hundreds of fully worked examples and over 1500 practice exercises. Check it out at <http://www.sharpemathematics.com>

### **Pre-calculus 11 (Adv) PCAL11**

**Prerequisite:** Successful completion of Mathematics 10 and have outstanding performance in relation to the learning outcomes prescribed for Mathematics 10.

### **Provincial Guide**

- A partial draft (Aug 25, 2014) is currently on the Moodle until the final draft is completed. The Pre-calculus 11 document cannot be printed until all diagrams have been finalized so anticipated distribution is not expected until sometime in October 2014-course is taught in Semester 2.
- Yearly Plan (Draft March 2014)

### **Core Resources**

- Pre-calculus 11 (McGraw Hill), Student Text (print)
- Pre-calculus 11 (McGraw Hill) Solutions Manual (CD)-McGraw Hill
- Pre-calculus 11 (McGraw Hill) Computerized Assessment Bank (CD)
- Pre-calculus 11 (McGraw Hill) CONNECT school for students (includes a digital student book)-McGraw Hill. Will be distributed (5-year licenses) to schools in the Fall 2014, well ahead of Semester 2, when the course will be offered. CONNECTSchool offers the complete InterACTIVE Student Resource; the PDF version of the Student Resource; self-assessment and personalized study plans; and more.
- Pre-calculus 11 (McGraw Hill) CONNECT school for teachers (includes digital teacher resource and digital student book)-McGraw Hill. Will be distributed (5-year licenses) to schools in the Fall 2014, well ahead of Semester 2, when the course will be offered. CONNECTSchool offers the entire online Teacher's Resource, including editable Blackline Masters; links to multi-media resources; and a wealth of media assets, interactive lessons and activities.
- The new **Mathematics Learning Commons Grade 11 Moodle** site for the three new courses (Mathematics at Work 11, Mathematics 11 and Pre-calculus 11) became live in late August 2014 and instructions for access to this Moodle was sent to schools at this time-contact Mark if you need assistance. In the meantime, the OurCloud repository for **grade 11 mathematics** will remain until January 2015. Documents will be added to the Moodle as they become available-yearly plans and draft curriculum guides for all three courses, Mathematics at Work 11, Mathematics 11, and Pre-calculus 11 are currently on there.

- Engaging site of resources for teachers to use with students site-a repository of engaging activities linked to the WNCP High School Math Curriculum, which suggests that teachers should “orchestrate the experiences” from which students extract meaning-thanks to Joe MacDonald for sharing! Reminds me of the NCTM Illuminations site. Videos from Dan Meyer and awesome performance assessments like the Tin Can project and much more! Check it out at <http://wncpactivemath.wordpress.com/>
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- Looking for quality assessment items for tests, quizzes, student discussions, etc. Check out the Grades 7-12 Item Bank at <http://itembank.ednet.ns.ca>. A Login ID and Password are required to access this site. You can obtain this from the Department of Education, at 424-4258 or by emailing [itembank@gov.ns.ca](mailto:itembank@gov.ns.ca). Questions from the **Item Bank** will be realigned with the new courses and posted to the appropriate Moodle when completed.
- Student Workbooks for the APEF Mathematics curriculum of Math 10, 11, and 12 from a teacher in NFLD is a resource available to our high school math teachers. The workbooks contain hundreds of fully worked examples and over 1500 practice exercises. Check it out at <http://www.sharpemathematics.com>

### **Mathematics at Work 11 (Grad) MTW11**

**Prerequisite:** Successful completion of Mathematics at Work 10 or Mathematics 10

#### **Provincial Guide**

- Mathematics at Work 11 Curriculum (Draft 2014). Curriculum documents for Mathematics at Work 11 will be distributed to schools in September 2014.
- Yearly Plan (Draft April 2014)

#### **Core Resources**

- Math at Work 11 (McGraw Hill), Teacher Guide (print)
- Math at Work 11 (McGraw Hill), Student Text (print). Access to the PDF's and digital files of the McGraw Hill Mathematics at Work 11 student book, by students and teachers, can now be accessed via the password protected cloud that

has been temporary set up. The link to the Cloud and the password is <http://goo.gl/VyBRkA> and password is maw11. This information will be on the Mathematics Learning Commons Grade 11 Moodle when it becomes available in September 2014.

- The new **Mathematics Learning Commons Grade 11 Moodle** site for the three new courses (Mathematics at Work 11, Mathematics 11 and Pre-calculus 11) became live in late August 2014 and instructions for access to this Moodle was sent to schools at this time-contact Mark if you need assistance. In the meantime, the OurCloud repository for **grade 11 mathematics** will remain until January 2015. Documents will be added to the Moodle as they become available-yearly plans and draft curriculum guides for all three courses, Mathematics at Work 11, Mathematics 11, and Pre-calculus 11 are currently on there.
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- Looking for quality assessment items for tests, quizzes, student discussions, etc. Check out the Grades 7-12 Item Bank at <http://itembank.ednet.ns.ca>. A Login ID and Password are required to access this site. You can obtain this from the Department of Education, at 424-4258 or by emailing [itembank@gov.ns.ca](mailto:itembank@gov.ns.ca). Questions from the **Item Bank** will be realigned with the new courses and posted to the appropriate Moodle when completed.



## **Mathematics Essentials 11 (Grad) MTHE11**

**Prerequisite:** Successful completion of Mathematics Essentials 10

### **Provincial Guide**

- Mathematics Essentials 11 (Draft November 2006)

### **Core Resources**

- Mathematics for Everyday Life 11 Student Text / Teacher's Resource
- Mathematics for Everyday Life 12 Student Text / Teacher's Resource
- The City - an exciting resource for teaching financial management. Check it out at <http://www.themoneybelt.gc.ca>. Mark MacLeod and Jeff Rhodenizer (BHS) have been trained using this resource.
- Item Bank
- [http://lrt.ednet.ns.ca/PD/HS\\_Math\\_Website/High\\_School\\_Math.html](http://lrt.ednet.ns.ca/PD/HS_Math_Website/High_School_Math.html)
- A provincial license of Autograph v3.3 has been purchased for all high schools, including Adult High Schools. This provides unlimited access to this software at all high school sites. Two support resources: Autograph Activities: Teacher Demonstrations and Autograph Activities: Student Investigations will also be sent out (March 2011)
- Our High School Math Advisory group, met on Wednesday, March 23<sup>rd</sup>, 2011, and developed a Placement Document that will help in our students choosing high school math courses that they can be successful in consultation with their teacher, Guidance Counselor and parents. These documents were being used beginning in the 2011-2012 school year.
- Looking for quality assessment items for tests, quizzes, student discussions, etc. Check out the Grades 7-12 Item Bank at <http://itembank.ednet.ns.ca>. A Login ID and Password are required to access this site. You can obtain this from the Department of Education, at 424-4258 or by emailing [itembank@gov.ns.ca](mailto:itembank@gov.ns.ca). Questions from the **Item Bank** will be realigned with the new courses and posted to the appropriate Moodle when completed.

## **Grade 12**

**The new Grade 12 WNCP curriculums will begin implementation in 2015-2016, consisting of Pre-calculus 12, Mathematics 12 and**

**Mathematics at Work 12.** Outcomes for the three new Grade 12 Math courses have been finalized and work will continue this year with 2015-16 being the 1st year of implementation.

### **Mathematics 12 (Acad) MTH12**

**Prerequisite:** Successful completion of Mathematics 10

**Recommended Prerequisite:** Successful completion of Mathematics 11

### **Provincial Guide**

- Atlantic Canada Mathematics Curriculum: Mathematics 12 / Advanced Mathematics 12 (2004)

- IPP code is MTH12IP / 008110. The code refers to the grade level at which the student requires an IPP for mathematics, not to the specific classroom in which a student who requires an IPP is placed.

### Core Resources

- Mathematical Modeling: Book 3 (2001) Student Text / Teacher's Resource. This is to advise that the department is not investing in further production of Mathematical Modeling, Book 3 (Stock Code: #22846), the textbook for Mathematics 12 and Advanced Mathematics 12. There seems hardly any demand for the text this year and little anticipated in the two years thereafter. The DoE shall be providing new resources to support the implementation of new grade 12 mathematics courses in September 2015. Given declining enrolment, you may wish to collect surplus copies that are no longer needed in your schools for redistribution in other schools if necessary over the next three years.
- [http://irt.ednet.ns.ca/PD/HS\\_Math\\_Website/High\\_School\\_Math.html](http://irt.ednet.ns.ca/PD/HS_Math_Website/High_School_Math.html)
- A provincial license of Autograph v3.3 has been purchased for all high schools, including Adult High Schools. This provides unlimited access to this software at all high school sites. Two support resources: Autograph Activities: Teacher Demonstrations and Autograph Activities: Student Investigations will also be sent out (March 2011)
- The 2012-2013 school year will be the last year that the Grade 12 Math NSE's will be written. The DoE will provide schools with a electronic copy of the assessment. We will leave it up to our schools to use the entire DoE assessment or parts of it and will administer on their own and mark as they do all their school exams. The NSE's will move to Grade 10 effective 2013-14.
- Our High School Math Advisory group, met on Wednesday, March 23<sup>rd</sup>, 2011, and developed a Placement Document that will help in our students choosing high school math courses that they can be successful in consultation with their teacher, Guidance Counselor and parents. These documents were being used beginning in the 2011-2012 school year.
- David Pilmer has developed a series of Mathematics 49 videos for the NSCC Adult Learning Program (ALP). Topics include Sinusoidal Functions, Quadratic Functions, Systems of Equations and more. To view the videos visit the website <http://www.youtube.com/watch?v=eaG4px5o5vs>
- Looking for quality assessment items for tests, quizzes, student discussions, etc. Check out the Grades 7-12 Item Bank at <http://itembank.ednet.ns.ca>. A Login ID and Password are required to access this site. You can obtain this from the Department of Education, at 424-4258 or by emailing [itembank@gov.ns.ca](mailto:itembank@gov.ns.ca). Questions from the **Item Bank** will be realigned with the new courses and posted to the appropriate Moodle when completed.
- Student Workbooks for the APEF Mathematics curriculum of Math 10, 11, and 12 from a teacher in NFLD is a resource available to our high school math teachers. The workbooks contain hundreds of fully worked examples and over 1500 practice exercises. Check it out at <http://www.sharpe-mathematics.com>

## **Advanced Mathematics 12 (Adv) MTH12AD**

**Prerequisite:** Successful completion of Mathematics 10 and have demonstrated outstanding performance in relation to the learning outcomes prescribed for Mathematics 10

**Recommended Prerequisite:** Successful completion of Advanced Mathematics 11

### **Provincial Guide**

- Atlantic Canada Mathematics Curriculum: Mathematics 12 / Advanced Mathematics 12 (2004)

### **Core Resources**

- Mathematical Modeling: Book 3 (2001) Student Text / Teacher's Resource. This is to advise that the department is not investing in further production of Mathematical Modeling, Book 3 (Stock Code: #22846), the textbook for Mathematics 12 and Advanced Mathematics 12. There seems hardly any demand for the text this year and little anticipated in the two years thereafter. The DoE shall be providing new resources to support the implementation of new grade 12 mathematics courses in September 2015. Given declining enrolment, you may wish to collect surplus copies that are no longer needed in your schools for redistribution in other schools if necessary over the next three years.
- [http://lrt.ednet.ns.ca/PD/HS\\_Math\\_Website/High\\_School\\_Math.html](http://lrt.ednet.ns.ca/PD/HS_Math_Website/High_School_Math.html)
- A provincial license of Autograph v3.3 has been purchased for all high schools, including Adult High Schools. This provides unlimited access to this software at all high school sites. Two support resources: Autograph Activities: Teacher Demonstrations and Autograph Activities: Student Investigations will also be sent out (March 2011)
- The 2012-2013 school year will be the last year that the Grade 12 Math NSE's will be written. The DoE will provide schools with a electronic copy of the assessment. We will leave it up to our schools to use the entire DoE assessment or parts of it and will administer on their own and mark as they do all their school exams. The NSE's will move to Grade 10 effective 2013-14.
- Our High School Math Advisory group, met on Wednesday, March 23<sup>rd</sup>, 2011, and developed a Placement Document that will help in our students choosing high school math courses that they can be successful in consultation with their teacher, Guidance Counselor and parents. These documents were being used beginning in the 2011-2012 school year.
- David Pilmer has developed a series of Mathematics 49 videos for the NSCC Adult Learning Program (ALP). Topics include Sinusoidal Functions, Quadratic Functions, Systems of Equations and more. To view the videos visit the website <http://www.youtube.com/watch?v=eaG4px5o5vs>
- Looking for quality assessment items for tests, quizzes, student discussions, etc. Check out the Grades 7-12 Item Bank at <http://itembank.ednet.ns.ca>. A Login ID and Password are required to access this site. You can obtain this from the Department of Education, at 424-4258 or by emailing [itembank@gov.ns.ca](mailto:itembank@gov.ns.ca). Questions from the **Item Bank** will be realigned with the new courses and posted to the appropriate Moodle when completed.

- Student Workbooks for the APEF Mathematics curriculum of Math 10, 11, and 12 from a teacher in NFLD is a resource available to our high school math teachers. The workbooks contain hundreds of fully worked examples and over 1500 practice exercises. Check it out at <http://www.sharpemathematics.com>

### **Pre-Calculus Mathematics 12 (Adv) PCAL12**

**Prerequisite:** Successful completion of Advanced Mathematics 11 and Advanced Mathematics 12 *or* Successful completion of Mathematics 11 and Mathematics 12 and have demonstrated very good to outstanding performance in relation to the learning outcomes prescribed for Mathematics 11 and Mathematics 12

#### **Provincial Guide**

- Atlantic Canada Mathematics Curriculum: Pre-Calculus Mathematics 12 / (Implementation Draft 2002)

#### **Core Resources**

- Mathematical Modeling: Book 4 (2002) Student Text / Teacher's Resource
- [http://lrt.ednet.ns.ca/PD/HS\\_Math\\_Website/High\\_School\\_Math.html](http://lrt.ednet.ns.ca/PD/HS_Math_Website/High_School_Math.html)
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### **Calculus 12 (Adv) CAL12**

**Prerequisite:** Successful completion of Pre-Calculus Mathematics 12

#### **Provincial Guide**

- Calculus 12 (Implementation Draft, December 2004)
- **Calculus 12** will run as is for the 2015-2016 school year to see how it flows from the new Pre-calculus 11 and 12 courses. If Calculus 12 needs to be tweaked, that will be done in the fall of 2016.

## Core Resources

- [Calculus](#): Graphical, Numerical & Algebraic Student Text / Teacher's Resource
- [http://lrt.ednet.ns.ca/PD/HS\\_Math\\_Website/High\\_School\\_Math.html](http://lrt.ednet.ns.ca/PD/HS_Math_Website/High_School_Math.html)
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## Math for the Workplace 12 (Grad) MWP12

**Prerequisite:** Successful completion of one mathematics course at the grade 10 level and one mathematics course at the grades 11 or 12 level

### Provincial Guide

- Math for the Workplace 12 (Draft, Nov 2007)
- **Mathematics for the Workplace 12** needs to be revised and will be renamed Mathematics Essentials 12-stay tuned.
- This credit can not be used as one of the two required math credits but can be used as one of the credits for the additional two credits needed for the compulsory math/science/technology area.

### Core Resources

- [http://lrt.ednet.ns.ca/PD/HS\\_Math\\_Website/High\\_School\\_Math.html](http://lrt.ednet.ns.ca/PD/HS_Math_Website/High_School_Math.html)
- A provincial license of Autograph v3.3 has been purchased for all high schools, including Adult High Schools. This provides unlimited access to this software at all high school sites. Two support resources: Autograph Activities: Teacher Demonstrations and Autograph Activities: Student Investigations will also be sent out (March 2011)
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- Looking for quality assessment items for tests, quizzes, student discussions, etc. Check out the Grades 7-12 Item Bank at <http://itembank.ednet.ns.ca>. A Login ID and Password are required to access this site. You can obtain this from the Department of Education, at 424-4258 or by emailing [itembank@gov.ns.ca](mailto:itembank@gov.ns.ca). Questions from the **Item Bank** will be realigned with the new courses and posted to the appropriate Moodle when completed.

### **Mathematics Foundations 12 (Grad) MTH12FND**

**Prerequisite:** Successful completion of Mathematics Foundations 10 or Mathematics 10

**Recommended Prerequisite:** Successful completion of Mathematics Foundations 11 or Mathematics 11

#### **Provincial Guide**

- Atlantic Canada Mathematics Curriculum: Mathematics Foundations 12 (Implementation Draft 2001)

#### **Core Resources**

- Constructing Mathematics: Book 3 (2000) Student Text / Teacher's Resource
- [http://lrt.ednet.ns.ca/PD/HS\\_Math\\_Website/High\\_School\\_Math.html](http://lrt.ednet.ns.ca/PD/HS_Math_Website/High_School_Math.html)
- A provincial license of Autograph v3.3 has been purchased for all high schools, including Adult High Schools. This provides unlimited access to this software at all high school sites. Two support resources: Autograph Activities: Teacher Demonstrations and Autograph Activities: Student Investigations will also be sent out (March 2011)
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