**Mathematics at Work 10 – General Information:**

Mathematics at Work 10 is a newly designed 110 - hour course designed to provide students with the mathematical understandings and critical-thinking skills identified for direct entry into the work force or for entry into programs of study that do not require *academic* mathematics.

In June, all students enrolled in Mathematics at Work 10 will write a provincial examination which will be based on all four course units..

The Nova Scotia Mathematics Curriculum is based upon several key assumptions or beliefs about mathematics learning which have grown out of research and practice. These beliefs include:

* mathematics learning is an active and constructive process;
* learners are individuals who bring a wide range of prior knowledge and experiences, and who learn via various styles and at different rates;
* learning is most likely to occur when placed in meaningful contexts and in an environment that supports exploration, risk taking, and critical thinking and that nurtures positive attitudes and sustained effort; and
* learning is most effective when standards of expectation are made clear with on-going assessment and feedback.

Students construct their understanding of mathematics by developing meaning based on a variety of learning experiences. This meaning is best developed when learners encounter mathematical experiences that proceed from simple to complex and from the concrete to the abstract. The use of manipulatives, visuals and a variety of pedagogical approaches can address the diversity of learning styles and developmental stages of students.

Students need to explore mathematics through solving problems in order to continue developing personal strategies and mathematical literacy. It is important to realize that it is acceptable to solve problems in different ways and that solutions may vary depending upon how the problem is understood.

The main goals of mathematics education are to prepare students to:

• use mathematics confidently to solve problems

• communicate and reason mathematically

• appreciate and value mathematics

• make connections between mathematics and its applications

• commit themselves to lifelong learning

• become mathematically literate adults, using mathematics to contribute to society.

**Mathematics at Work 10 – Course Content and Schedule:**

Mathematics at Work 10 begins with *Measurement* which includes both the use of SI and Imperial units of measurement, as well as the study of 2D and 3D objects. After students have completed this unit they will begin *Geometry*. This includes the use of games and puzzles (integrated throughout the course), the study of convex polygons, Pythagorean theorem, trigonometry and angle relationships when given parallel lines. These first two units comprise approximately 85 - 90 hours of this 110 hour course. Once they have been completed students will begin their study of *Number*. In this unit students will study currency exchange, unit pricing, and wages. *Algebra* as well as *Games and Puzzles* developing logic and spatial reasoning are integrated throughout the complete course.

**Mathematics at Work 10 – Assessment: (subject to change)**

Various tools will be used to assess student achievement and work habits:.

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| **Assignments: 20%**   * This includes quick “concept checks”, in-class and at-home practice (which is essential for success in mathematics)   **Projects: 15%**  **Tests: 30%**  **Cumulative Assessments: 10%**   * There will be two large in-class assessments designed to familiarize students with the format and content of the final examination   **Final Examination: 25%** | **The Learner Profile**  Student report cards will provide information about achievement of the mathematics outcomes as well as work habits:   |  | | --- | | **Classwork and Assignments**  Completes classwork  Completes homework  Strives to produce quality work that is on time |  |  | | --- | | **Organizational Skills**  Comes prepared for class  Manages own materials and belongings  Uses time efficiently |  |  | | --- | | **Interactions with Others**  Interacts positively by respecting, encouraging and cooperating with others  Works collaboratively |  |  | | --- | | **Responsibility and Independence**  Accepts responsibility for own actions  Arrives on time for class  Follows instructions/directions/rules and routines  Respects school property and the property of others  Works independently and seeks help appropriately | |

**Mathematics at Work 10 – Support Information**

The text resource that has been selected is Math at Work 10 (McGraw-Hill Ryerson). It is available as a hard copy. However, no textbook can replace the rich experiences, conversations and discussions that we have in class. As such, *good attendance* is critical for success in mathematics.

Students and families can keep aware of progress in this class by accessing the Student-Parent portal. I can be contacted at school at 532-3150 or at [jeremybarnes@staff.ednet.ns.ca](mailto:jeremybarnes@staff.ednet.ns.ca). I have created a class website for an alternative form of communication, which can be found at <http://mrbarnes2.weebly.com/>. I will post homework/upcoming assessment details on here. Extra help will be made available to students at lunch on Tuesdays and Thursdays. If this time does not work for the student, then they need to come and see me to arrange for a different time.

I am very much looking forward to a successful semester together!

Mr. Barnes