

JARVIS COLLEGIATE INSTITUTE
MAT1L Course Outline 2009-2010

This Course Outline is based upon the Ministry of Education and Training Ontario Curriculum for the Grade 9 Locally Developed Compulsory Credit Course for Mathematics as per the document of 2005.

Board:	Toronto District School Board
School:	Jarvis Collegiate Institute
Curriculum Leader:	Terry Paradellis
Developing Teachers:	Terry Paradellis
Date of Revision:	June 2009
Course Title:	Locally Developed Compulsory Credit Course, Mathematics, Grade 9
Grade:	9
Code:	MAT1L
Credit Value:	1.0
Textbook:	Math Essentials 9, McGraw-Hill Ryerson, 2005
Resources:	Teacher's Resource for Math Essentials 9 Course Profile for MAT1L (2005) Teacher-made Worksheets Algebra with Pizzazz & Pre-Algebra with Pizzazz Manipulatives, Graphing Calculators, Fathom & Geometers' Sketchpad

Course Description

This course emphasizes further development of mathematical knowledge and skills to prepare students for success in their everyday lives, in the workplace, and in the Grade 10 LDCC course. The course is organized in three strands related to money sense, measurement, and proportional reasoning. In all strands, the focus is on developing and consolidating key foundational mathematical concepts and skills by solving authentic, everyday problems. Students have opportunities to further develop their mathematical literacy and problem-solving skills and to continue developing their skills in reading, writing, and oral language through relevant and practical math activities.

Strands

Developing and Consolidating Money Sense	35 periods
Developing and Consolidating Concepts in Measurement	51 periods
Developing Concepts in Proportional Reasoning	16 periods

Program Planning Considerations

Exceptional Students:	Additional time will be allowed for tests. Additional accommodations will be provided in consultation with the Guidance, Special Education and ESL departments.
Technology:	Manipulatives, Graphing Calculators, and Geometer's Sketchpad will be utilized for hands-on and technology-related applications.
Career Education:	Links to related fields will be established throughout the course.
Co-operative Education:	These will be provided in association with Guidance Department.
Mathematics Anxiety:	Attention will be addressed according to the following: <ul style="list-style-type: none">• Cultural perspectives• Positive reinforcements• Variety of assessment techniques• Group structures• Consideration for Learning Styles

Learning Skills

Assessment of the learning skills will be done on an ongoing basis throughout the academic year by observations of students at work, checklists and interviews. This will include:

Classwork/homework	(Work habits, homework and organization)
Completed work and seeking assistance	(Organization and initiative)
Persistence and independence at tasks	(Working independently and initiative)
Extension of task	(Organization and initiative)
Achievement of group goals	(Team work)

Assessment Strategies

A variety of teaching/assessment strategies to address students' needs will be used during the school year. Formative assessments will be ongoing through out the academic year. These may include:

- Diagnostic assessment
- Formative assessment
- Performance assessment
- Portfolio assessment
- Rubrics
- Checklists

Term Summative Evaluations (70% Term Work)

- Tests, quizzes, tasks and other forms of term summative evaluations will occur throughout the academic year at the end of units of work as outlined in the accompanying course outline.
- Students will be provided with reasonable opportunities to master skills relating to the achievement of the curriculum expectations before assessment and evaluation occurs.
- Major evaluations will be announced at least one week in advance.
- Accommodations will be made for school activities, statutory holidays, religious days, cultural days, sports events and other occurrences that may impact on any scheduled evaluation. It is the student's responsibility to notify teachers of such absences in advance and to make up missed work.
- Absence on the day of an evaluation must be documented. If a student must miss an evaluation, s/he is expected to:
 - a) see the teacher before the absence to arrange for an alternative date to make up the evaluation; or
 - b) in case of illness or unexpected absence, present a note to the teacher, signed by a parent or guardian, immediately upon their return to explain the absence. An alternate evaluation will then be scheduled at a mutually convenient time.
- The Jarvis Late Policy applies to all assignments and evaluations. See your Agenda book.
- Cheating will not be tolerated in any form and will be dealt with appropriately.

Final Mark Calculation

Calculation of the Term Mark will be based upon the *Categories* of the *Achievement Chart*. This chart is meant to assist teachers in planning instruction and learning activities for the achievement of the curriculum expectations. It is also used in designing assessment and evaluation tools and in providing feedback to students. Each mathematical topic will contain each category in the chart due to the integrated nature of the discipline in mathematics. Final marks will be calculated as follows:

Term Work:	70%	Levels of Achievement:
Knowledge and Understanding:	35%	Level 1: 50 - 59%
Application:	35%	Level 2: 60 – 69%
Thinking and Inquiry:	15%	Level 3: 70 – 79%
Communication:	15%	Level 4: 80 - 100%
Final Summative Evaluations:	30%	

Reporting

Report #1	Report #2	June Report
100% Term Work	100% Term Work (Cumulative Sept – Feb)	70% Term Work + 30% Summative Evaluations (Cumulative Sept to June)

Communication

Access to extra help and mark records. Students are encouraged to consult their teachers on a regular basis for extra help and guidance as it relates to improving their academic performance. Students are also expected to discuss strategies for improving their grades with their teachers. Students are expected to view their report cards as an indication of their current achievement and discuss with teachers for clarification.

Communication with Parents/Guardians. Comments pertaining to academic achievement and learning skills are placed on the report cards are primarily to provide feedback for parents/guardians as well as students. Parent/guardian nights can be used for one to one discussion. At times it may be necessary to contact parents/guardians by telephone to discuss a student's performance. Parents/guardians are also encouraged to contact teachers as and when the need arises.

JARVIS COLLEGIATE INSTITUTE
MAT1L Daily Course Outline 2009-2010

Textbook: Math Essentials 9, McGraw-Hill Ryerson, 2005

Strand #1: Developing and Consolidating Money Sense (35 periods)

Overall Expectations:

- To interpret, write, and round decimal numbers with understanding in everyday money situations;
- To solve problems involving money, drawn from everyday situations;
- To communicate information about money concepts;
- To use literacy skills (reading, writing, listening, and speaking) to obtain and communicate information about money sense.

Strand #2: Developing and Consolidating Concepts in Measurement (51 periods)

Overall Expectations:

- To estimate and measure length, capacity, and mass, in order to consolidate understanding of the metric system;
- To estimate and measure length, using the Imperial system;
- To solve problems, carry out investigations, estimate, and measure, using metric units, to consolidate understanding of perimeter, area and volume;
- To communicate information about measurement concepts;
- To use measurement skills (reading, writing, listening, and speaking) to obtain and communicate information about measurement concepts.

Strand #3: Developing Concepts in Proportional Reasoning (16 periods)

Overall Expectations:

- To determine relationships among fractions, percentages, ratios and rates by constructing diagrams, building models, and estimating measurements;
- To solve problems drawn from everyday situations involving percent, ratio, rate, and fractions;
- To communicate information about proportional reasoning;
- To use literacy skills (reading, writing, listening, and speaking) to obtain and communicate information about proportional reasoning.

Per #	TOPIC	Section	ASSIGNMENT	Supplementary Resources
UNIT #1: MONEY MATTERS (19 periods)				
1 & 2	Where does it go? - Budgeting	1.1	pp. 2-5	
3 & 4	Food for thought. - Rounding	1.2	pp. 6-9	
5	Shopping on a budget – estimating; budgeting	1.3	pp. 10-13	Profile Activity 4.1
6 & 7	Making change	1.4	pp. 14-17	Profile Activity 2.3
8	Skills Practice - Percents		pp. 18-19	
9	Tax not included	1.5	pp. 20-23	
10 & 11	Tax	1.6	pp. 24-27	Profile Activity 4.2
12	My spending	1.7	pp. 28-31	
13	Save, save, save	1.8	pp. 32-35	
14	Fraction of the price – calculating discounts	1.9	pp. 36-39	Profile Activity 4.3
15	A shopping trip	1.10	pp. 40-43	
16	I'll take two – purchasing multiple items	1.11	pp. 44-47	
17	Best buy – unit costs	1.12	pp. 48-51	
18	Review		pp. 52-53	
19	TASK – Stocking up for school		p. 54	
UNIT #2: LINEAR MEASUREMENT – METRIC (8 periods)				
1	Metric lengths and references	2.1	pp. 55-59	Profile Activity 2.1
2	Estimating and measuring metric lengths	2.2	pp. 60-63	Profile Activity 3.1
3 & 4	Thinking outside the box - perimeter	2.3	pp. 64-67	Profile Activity 3.2
5	Skills Practice: Scale diagrams		pp. 68-69	
6	Monster trucks – perimeters & scale diagrams	2.4	pp. 70-73	
7	Review		pp. 74-75	
8	TASK – School renovations		p. 76	
UNIT #3: LINEAR MEASUREMENT – IMPERIAL (9 periods)				
1	Introduction to imperial measure	3.1	pp. 77-81	
2	Skills Practice – Equivalent fractions		pp. 82-83	
3	Imperial lengths and references	3.2	pp. 84-84	
4	Skills Practice – Adding imperial measures		pp. 88-89	
5	Skills Practice – Multiplying imperial measures		p. 90	
6	Calculating perimeter using imperial measures	3.3	pp. 91-93	Profile Activity 6.1
7	My own room – perimeter using scale diagrams	3.4	pp. 94-97	

Per #	TOPIC	Section	ASSIGNMENT	Supplementary Resources
8	Review		pp. 98-99	
9	TASK – The Master Bedroom		p. 100	
UNIT #4: COOKING (12 periods)				
1	Measuring tools	4.1	pp. 101-105	
2	Measuring without tools	4.2	pp. 106-109	
3	Tech tip – Multiplying with fractions		pp. 110-111	
4	Cooking without a kitchen – part 1	4.3	pp. 112-115	
5	Skills Practice: Reducing ratios and fractions		pp. 116-117	
6	Cooking without a kitchen – part 2	4.4	pp. 118-121	
7	Cooking for a crowd – using ratios	4.5	pp. 122-125	
8	Snack time – using ratios and fractions	4.6	pp. 126-129	
9	Skills Practice: Adding and subtracting fractions		pp. 130-131	
10	Shopping for snacks – ratios and unit pricing	4.7	pp. 132-135	Profile Activity 5.2
11	Review		pp. 136-137	
12	TASK – Working with recipes		p. 138	
UNIT #5: SPORTS & LEISURE (10 periods)				
1	Personal rates – ratios & rates	5.1	pp. 139-143	
2	Skills practice: Equivalent ratios & rates		pp. 144-145	
3	Lining a soccer field – metric, perimeter, rate	5.2	pp. 146-149	
4	Doing the butterfly – metric, scale diagrams	5.3	pp. 150-156	
5 & 6	Skills practice: multiplying by 12 Defying gravity – imperial lengths	5.4	pp. 154-155 pp. 156-159	
7	Playing shinny – imperial, scale diagrams	5.5	pp. 160-163	
8	Money and sports - money sense	5.6	pp. 164-167	
9	Review		pp. 168-169	
10	TASK - Beach Volleyball		p. 170	
UNIT #6: DINING OUT (8 periods)				
1	School lunches - money sense and rates	6.1	pp. 171-175	
2	Fast food – rounding, comparing money	6.2	pp. 176-178	
3 & 4	Skills practice: estimating long sums Your treat – decimals, percents	6.3	p. 179 pp. 180-183	
5	At the movies – fractions, tax. rate	6.4	pp. 184-187	
6	Today's special	6.5	pp. 188-191	
7	Review		pp. 192-193	
8	TASK – Out for Dinner		p. 194	
UNIT #7: HOME IMPROVEMENT (12 periods)				
1	How many metres or feet? – personal references	7.1	pp. 195-199	
2 & 3	Measuring surfaces with squares - area	7.2	pp. 200-203	Profile Activity 3.3
4	How many square centimetres? - rectangles	7.3	pp. 204-206	
5 & 6	Skills practice: Converting metric area units Regions and rectangles	7.4	p. 207 pp. 208-211	
7	How much do you need? - +/- areas	7.5	pp. 212-215	
8	Area of a triangle	7.6	pp. 216-219	
9	Work with triangular areas	7.7	pp. 220-223	
10 & 11	Review		pp. 224-225	
12	TASK – Fix up a shed			Profile Activities 3.4, 6.4, 6.5
UNIT #8: HEALTHY CHOICES (9 periods)				
1 & 2	Estimating and measuring mass	8.1	pp. 227-231	Profile Activity 2.2
2	Choosing units for mass	8.2	pp. 232-235	
3	How are foods solid? – mass and volume	8.3	pp. 236-239	
4	Portion sizes	8.4	pp. 240-243	
5	What you get in packaged foods - %, ratio, mass	8.5	pp. 244-247	
6	Comparing amounts of nutrients - %	8.6	pp. 248-251	Profile Activity 5.2
7	Heart rate – rates & conversions	8.7	pp. 252-255	
8	Review		pp. 256-257	
9	TASK – Planning a healthy day		p. 258	

Per #	TOPIC	Section	ASSIGNMENT	Supplementary Resources
UNIT #9: BOXED IN (8 periods)				
1 & 2	How many ways can you package it? - volume	9.1	pp. 259-263	Profile Activity 6.3
3	Volume – rectangular prisms	9.2	pp. 264-267	
3	Boxes, boxes, boxes	9.3	pp. 268-271	
4 & 5	Changing bases – L and T shaped	9.4	pp. 272-275	
6	Boxes for Charity – measuring & calculating vol.	9.5	pp. 276-279	
7	Review		pp. 280-281	
8	TASK – Shipping Help		p. 282	
UNIT #10: THE WORLD OF WORK (7 periods)				
1	Skills Practice: Time		pp. 283-285	
2	Babysitting – rates of pay & time	10.1	pp. 286-289	
3	A week’s work - rates of pay & time	10.2	pp. 290-293	
4	Moving on up – rates and percents	10.3	pp. 294-297	
5	Where does it go? - budgeting	10.4	pp. 298-301	
6	Review		pp. 302-303	
7	TASK – Where does the money go?		p. 304	
Cumulative Review (Units #1-10)				
Final Summative Evaluations (30% of Final Mark)				