



St Stephen's School – Carramar Campus

Mathematics Learning Area

Year 8 – Student Course Notes 2008

1. All students must have the following equipment as well as their textbook: pens; pencils; eraser; ruler; Math-Aid; Proliner; graph paper; exercise book for writing/journal activities and a suitable scientific calculator.
2. Students must keep and maintain a Mathematics Journal.
3. Investigations and problem solving form part of the assessment schedule.
4. Students must keep a portfolio containing all assessments. Parents are expected to sight and sign these.
5. At the end of each topic it is a good idea to file all work at home in a way that helps examination revision later in the semester.
6. All classes in Year 8 study the same course during term 1 but there will be some changes to class groupings in Term 2 to stream students into appropriate ability levels.
7. During significant assessments teachers may permit students to prepare 1 A4 page of notes to be used during the assessment. On occasions the student's mathematics journal may also be permitted.
8. In the interest of fairness and as stated in the school Assessment Policy, students who are absent for any significant mathematics assessment are expected to produce a medical certificate. Failure to do so may result in a zero score for the missed assessment.
9. Only approved calculators as stated on the booklist for this course are permitted in assessments. Some assessments or parts of assessment will be resource free. i.e. No calculators or notes permitted.
10. Homework is an integral part of our mathematics curriculum. Year 8 students should be completing an average of 20 - 25 minutes mathematics homework (fun work at home) at least 5 nights a week. Once class work and set homework has been completed students are expected to work on assignments, mathematics journals, extension work, revision, read ahead in text book etc.

Assessment Breakdown Year 8

Semester 1

Tests (Common to level)	65%
Investigations, problem solving and/or assignments	25%
Journal	10%

Assessment Breakdown Year 8

Semester 2

Tests (Common to level)	70%
Investigations, problem solving and/or assignments	25%
Journal	5%

Final mark for year will be the average of both semesters' marks.

Grades allocated (from high to low) will be A, B, C, D and E.

Parent Signature:

YEAR 8 MATHEMATICS MENTAL SKILLS

While the appropriate use of a calculator is a key objective, much of the “street mathematics” we do is performed mentally. These skills should be practiced regularly.

Furthermore, mental is useful for revising concepts previously taught or alerting you to skills to be used in lessons.

The following is a list of some of the skills that should be practiced in mental (after the relevant lessons have been taught in most cases).

- money operations
- units of time
- mixed operations with whole numbers
- multiplying & dividing by multiples of 10
- decimals multiplied or divided by a whole number
- continuing number sequences
- fraction of a quantity
- estimation of a computation by rounding
- factors, multiples, squares, square roots, divisibility tests for whole numbers
- fraction/decimal/percentage equivalents
- percentage of a quantity
- solving simple equations
- comparisons of negative integers
- angle relationships
- using ratios
- simple perimeters, areas & volumes
- recall of terminology
- spelling of terminology
- substitution into expressions

Year 8 Mathematics Program 2008 – St Stephen's School, Carramar

Teachers: Wendy Brown, Simon Weaver, Adam Dwyer, Catherine Stanley, Stephen Corcoran.

Text: Maths for WA1 (Longman). Supplement lessons with Mathletics. (www.mathletics.com.au)

St Stephen's Maths Website: www.mathxtc.com

PROGRAM – TERM 1 – 2007

Week	Lessons	Topic	Text Ref / Resources	Assessments	Extras Available
1-3 ** Boys camp week 2 11/2 – 13/2	7	Chapter 1 Whole Number Revision Revision: - Place Value - Operations On Whole Numbers - Estimation - Exploring powers of 10 - Order of operations	MWA1 Exercise 1A o 1I	Test 1 middle week 3 on ch 1	MWA1 Puzzles P 22 Companion Website Technology Applications - BIDMAS - Magic Squares Number Puzzles MWA1 Extension P 26
4-6	9	Chapter 2 Facts About Numbers Revision: - Factors And Multiples - Primes And Composites - Odds And Evens - Squares And Square Roots - Index Notation Develop New Concepts: - Directed Numbers - Operations	MWA1 Exercise 2A To 2O	Test 2 end week 6 on ch 2	MWA1 Puzzles P 50 Companion Website Technology Applications - BIDMAS - Divisibility - Directed Numbers
7-10 ** Girls camp week 7 17/3 – 19/3	9 ** Easter 21/3 – 24/3	Chapter 3 Fractions Revision: - Equivalent Fractions - Adding Fractions - Subtracting Fractions - Multiplying Fractions Develop New Concepts: - Fractions Of Quantities - Representing Fractions And Decimals On A Number Line	MWA1 Exercise 3A to 3J	Collect journals for assessment during week 9 Test 3 week 10 on ch 3	MWA1 Puzzles P 78 Companion Website Technology Applications - Missing Fractions - Fraction Patterns - Shaded Diagrams

** As the girls and boys are going on separate camps, we will suspend the normal maths program during each camp and do an alternative activity such as the Task Centre materials or an investigation.

PROGRAM – TERM 2 – 2007

Week	Lessons	Topic	Text Ref / Resources	Assessments	Extras Available
1-3	8	Chapter 4 Decimals And Percentages Revision: - Place Value - Rounding Decimals - Operations Develop New Concepts: - Fractions And Decimals - Percentages - Squares And Square Roots Of Decimals	MWA1 Exercise 4A To 4N	Test 4 middle week 3 on ch 4	MWA1 Puzzles P 106 Companion Website Technology Applications - Percentages - Currency Conversions - Calculating Percentages
4-5 (staff retreat week 5 29/5 – 30/5)	6	Chapter 5 Length And Perimeter Revision: - Units Of Length - Estimating Lengths - Converting Lengths - Perimeter Of Straight Sided Shapes Develop New Concepts: - Circumference Of Circles - Scale Drawings	MWA1 Exercise 5A To 5J	EPW	MWA1 Puzzles P 140 Companion Website Technology Applications - Fencing Australia - Perimeter Of Rectangles - Perimeter Of Shapes
6-8	6	Chapter 6 Area And Volume Revision: - Areas On Grids - Area Of Rectangles Develop New Concepts: - Area Of Parallelograms - Area Of Triangles - Volume Of Prisms	MWA1 Exercise 6A To 6K	Test 6 start of week 8 on ch 5 & ch 6	MWA1 Puzzles P 172 Companion Website Technology Applications - Area Activities - Carla's Chicken Run - Area Puzzle - Scale Factors Animation

Week	Lessons	Topic	Text Ref/Resources	Assessments	Extras Available
8-9	4	Chapter 7 Angles Revision: - Naming Angles - Measuring Angles - Drawing Angles Develop New Concepts: - Complementary Angles - Supplementary Angles - Angles In A Circle	MWA1 Exercise 7A To 7G	Collect journals for assessment during week 9 Test 7 end week 9 on ch 7	MWA1 Puzzles P 198 Companion Website Technology Applications - Flower Power - Supplementary & Complementary Angles
10	3 Continue next term	Chapter 8 Time And Mass Revision: - Timelines - Time Conversions - Calenders - Timetables	MWA1 Exercise 8A To 8D		MWA1 Puzzles P 222

PROGRAM – TERM 3 – 2007

Week	Lessons	Topic	Text Ref / Resources	Assessments	Extras Available
1	2	Continue with chapter 8 from term 2 Develop New Concepts: • Time Zones • Mass	MWA1 Exercise 8E To 8G		MWA1 Puzzles P 222 Companion Website Technology Applications • Tide Times • Arrival Times • Time Differences
2-4	8	Chapter 9 Polygons And Parallel Lines Revision: • Naming Triangles • Naming Quadrilaterals Develop New Concepts: • Angle Sum Of A Triangle • Angle Sum Of A Quadrilateral • Naming Polygons • Angle Sum Of A Polygon • Angles In Parallel Lines	MWA1 Exercise 9A To 9I	EPW Test 8 middle week 4 on ch 8 & ch 9	MWA1 Puzzles P 250 Companion Website Technology Applications • Triangles • Quadrilaterals • Name The Shape • Angles In Parallel Lines Animation
4-5	4	Chapter 10 Polyhedra And Networks Revision: • Naming Solid Shapes Develop New Concepts: • Nets Of Solid Shapes • Drawing 3D Shapes • Naming Polyhedra • Simple Networks	MWA1 Exercise 10A – 10E		MWA1 Puzzles P 274 Companion Website Technology Applications • Polyhedra • Nets For Polyhedra • Solid Shapes

Week	Lessons	Topic	Text Ref / Resources	Assessments	Extras Available
6-7	3	Chapter 11 Location Revision: • Directions In Two Dimensions • The Co-Ordinate Number Plane Develop New Concepts: • Scale Maps • Maps And Bearings	MWA1 Exercise 11A MWA1 Exercise 11B-11D	Test 9 end week 7 on ch 10 & ch 11	MWA1 Puzzles P 296 Companion Website Technology Applications • Tic-Tac-Toe • Plotting Points • Plotting Co-ords
8-9	5	Chapter 13 Probability Revision: • The Language Of Chance	MWA1 Exercise 13A-F	Test 9 end week 8 on ch 13	MWA1 Puzzles P 338
9 - 10	6 Continue next term	Chapter 14 Statistics Revision: • Collecting Data • Column Graphs • Pie Graphs Develop New Concepts: • Dot Plots • Mode, Mean, Median And Range • Stem And Leaf Plots • Venn Diagrams • Two Way Tables	MWA1 Exercise 14A -14G	Collect journals for assessment during week 9	MWA1 Puzzles P 372 Companion Website Technology Applications • Spending Spree • Music Charts • Interpreting A Column Graph

PROGRAM – TERM 4 – 2007

Week	Lessons	Topic	Text Ref / Resources	Assessments	Extras Available
1-2	3	Continue with chapter 14 - statistics	MWA1 Exercise 14H -14I	Test 10 start week 2 on ch 14	
2-4	8	Chapter 15 Number Patterns And Graphs Revision: • Number Patterns • Writing Rules From Previous Terms Develop New Concepts: • Following Rules • Writing Rules • Co-Ordinate Plane • Graphing Lines • Comparing Points • Interpreting Graphs	MWA1 Exercise 15A-15K	EPW Test 11 end week 4 on ch15	MWA1 Puzzles P 406 Companion Website Technology Applications • Co-Ordinates • Straight Lines • Number Patterns
5-6	6	Chapter 16 Symbols And Equations Revision: • Writing Expressions • Pronumerals Develop New Concepts: • Simplifying Expressions • Substitution Into Expressions • Solving Simple Equations	MWA1 Exercise 16A-16I	Test 12 end week 6 on ch16	MWA1 Puzzles P 432 Companion Website Technology Applications • Magic Square Generator • Equations Test • Equations Puzzle
7-8	4	Chapter 12 Transformations Revision: • Congruent Triangles Develop New Concepts: • Enlargements • Translation • Reflections • Rotations	MWA1 Exercise 12A-F		MWA1 Puzzles P 318 Companion Website Technology Applications • Tessellations • Transformations • Transformations Puzzle