

ST. MARY'S COLLEGE

FORM 1

SUBJECT-MATHEMATICS

Course Outline 2014-2015

Term 1

Proposed Date/Week	Unit/Section	Topic	Modules
1	1	<u>Arithmetic: Place Value</u>	Definition of number types and the relation to each other Place value for integers Number in words and vice versa Rounding to nearest 10, 100, 1000. Rounding in context Vocabulary: sum, difference Estimating measurement, length, weight, time reasonable answers in calculations
-	.	Place value and rounding	
		Addition and subtraction of whole numbers Estimation	Vocabulary: product Operation properties Commutative, associative and distributive laws Mental calculation
	2	Multiplication and division of whole numbers	Problems in context
		Problems involving operations	
2-3		<u>Directed numbers: Negative numbers</u>	Concept of negative number Use of number line for reference Brackets in calculation Number sequences
		Addition and subtraction	
		Multiplication and division	Basic calculations Two way table rules for justification
4	4	<u>Factors and Indices</u>	
		Factors and prime numbers	Multiplication and division facts Definition of prime number Simple test for divisibility i.e. 2, 3, 5, 10 Definition of prime factor Factor trees Express any number as a product of its prime factors Laws of indices not included
		Prime factors	Finding HCF and LCM by observation and listing all prime factors

5 -		<p>Index notation</p> <p>Highest common multiple (HCF) Lowest common multiple (LCM)</p> <p>Composite number <u>Number Patterns and Sequences</u> Pictorial logic patterns</p> <p>Multiples</p> <p>Find the next term</p> <p>Generating number sequence</p> <p>Extended number Sequence</p>	<p>Definition of composite number</p> <p>Simple patterns but with several variations Multiples of whole numbers Identify the pattern e.g. constant difference Describe in words a formulae to generate a number sequence Using a formulae to generate a number sequence.</p> <p>Special sequences: triangular, square, cubic numbers Fibonacci sequence Sequence with geometrical shapes</p> <p>Magic squares</p>
Proposed Date/Week	Unit/Section	Topic	Modules
6-8	3	<p><u>Logic</u></p> <p>Logic puzzles</p> <p>Set and Venn diagrams</p> <p>Set notation</p>	<p>Identifying properties of sets Listing elements of a set Illustrating set in Venn Diagrams Finding the intersection and union of two sets and the complement of set Universal set Intersection Union Compliment Subset Empty set Number of members in a set</p>
9-11 -	11	<p><u>Introduction to Geometry</u></p> <p>Geometric vocabulary</p> <p>Classifying angles</p> <p>Measuring angles</p> <p>Constructing angles</p>	<p>Point, line, line segment, ray, angle, plane Acute, obtuse, reflex, right angle</p> <p>Using a protractor</p> <p>Using a protractor and ruler</p>

Proposed Date/Week	Unit/Section	Topic	Modules
9-10	5	<u>Arithmetic : Fractions</u> Fractions Equivalent fractions Fractions of quantities Mixed numbers and vulgar fractions Addition and Subtraction	Numbers of the form a/b ($b \neq 0$) Identifying fractions Representing fractions Diagrammatic representation of equivalent fractions Mental practice Ordering fractions Numerically and in context Converting from mixed to improper Converting from improper to mixed Same denominator Different denominator Mixed numbers Problems in context Integer \times fraction Fraction \times fraction Mixed number \times mixed number
	6	Multiplying fractions Dividing fractions Ratio and proportion	Problems in context Fraction \div integer integer \div fraction Fraction \div fraction Problems in context Problems in context
11		<u>Arithmetic: Decimals</u>	Converting fractions to decimal. Place value Ordering decimal numbers Rounding off to the prescribed decimal place
12		<u>Relations and Functions</u> Relation	Definition of relation and functions Mapping and arrow diagrams Ordered pairs Tables Relation between all concepts

Term 3

Proposed Date/Week	Unit/Section	Topic	Modules
1-3 4		Coordinates Polygon	Plotting points in the four quadrants Definition of a Polygon. Identify the characteristics of a polygon Regular(up to and including a decagon) and irregular polygon Plotting polygons
5-7		Perimeter Area Area of rectangle and triangle Area of compound shape	Definition of the perimeter of a shape Counting squares Estimation by squares Units needed including conversion between metric systems Defining a compound shape Finding area of compound shape by
8-9		Angles	Parallel and intersecting lines
10-11		Data collection and presentation Collection of data	Types of Data Using suitable data collection sheet: tally chart Illustration of data: Pictogram Bar chart Pie chart