St Joseph's RC Middle School

Mathematics Subject Overview Year 7

	Autumn		Spring		Summer	
	1	2	1	2	1	2
Topic	**Algebraic Thinking**	**Place value and Proportion**	**Applications of Number**	**Directed Number Fractional Thinking**	**Lines and Angles**	**Reasoning with Number**
Areas of curriculum covered	Describe and continue sequences in diagram and number forms, both linear and non linear Using single function machines and series of two function machines with numbers bar models and letters Forming and substituting into expressions, including generating sequences Representing functions graphically. Understanding equality and fact families Forming and solving one-step equations Understanding equivalence Collecting like terms	Describe and continue sequences in diagram and number forms, both linear and non-linear. Integer place value up to one billion Decimal place values to hundredths Working out and using number lines Comparing and ordering numbers The range and the median Rounding to positive powers of ten and to one significant figure Representing tenths and hundredths of diagram and number lines Interchanging between fractions, decimals and percentages for multiples of tenths and quarters. Interpreting pie charts Equivalent fractions Converting between any fraction, decimal and percentage	Use formal methods of addition with integers and decimals Solve problems in the context of perimeter, money and frequency trees and tables Solve problems in the context of perimeter, money and frequency tree's and tables Multiplying by 10, 100, and 1000; unit conversions Formal methods of multiplication and division HCF and LCM Areas of triangles, rectangles and parallelograms Finding the mean Finding fractions and percentages of amounts Solving two-step equations (with and without a calculator) Introducing to the order of operations	Ordering directed numbers with and without context Revisit four operations to include directed number Order of operations Representing tenths and hundredths on diagrams and number lines Adding and subtracting fractions with a common denominator, including with answers above one Revisit equivalent fractions Adding and subtracting fractions with simple different denominators e.g quarters / eights, thirds/sixths Mixed questions e.g ¾ + 0.2	Drawing and measuring lines and angles using ruler and protractor Understanding and using notation for line sand angles Understand parallel and perpendicular Recognise types of triangle, quadrilateral and other polygons Drawing and interpreting pie charts Calculating using angles at a point, angles , on a straight line and vertically opposite angles Calculating missing angles in triangles and quadrilaterals	Mental arithmetic Strartegies Using known facts to derive other facts, including algebraic expressions Understanding and using set notation Venn diagrams Probability of a single event Types of number, including prime factorisation Powers and roots Using counterexamples