YEAR 8 MATHEMATICS

No	Topic	STP 7A	Investigations	CATs
1	**Number – Addition & Subtraction** Improve Mental Maths; Addition of Whole Numbers; Subtraction of Whole Numbers; Improve Estimation Skills.	Ch 1	Roman Numerals	
2	**Number – Multiplication & Division** Improve Mental Maths; Multiplication of Whole Numbers; Division of Whole Numbers; Understand and use the correct order for operations.	Ch 2	Russian Multiplication, Centuries	**Test (Topics 1 & 2)** **Computation & Mental Arithmetic**
3	**Number – Properties & Patterns** Recognise prime, square and cube numbers, Know the difference between multiples and factors; Spot patterns in lists of numbers; Create a sequence of numbers from a rule.	Ch 4	Prime Numbers, Fibonacci	**Homework (Topics 1– 3)**
4	**Geometry - Angles** Understand and use degrees; Estimate angles; Measure angles using a protractor; Identify different types of angle; Calculate missing angles in a diagram; Use Logo.	Ch 10	Measuring in degrees	**Homework (Topic 4)**
5	**Algebra 1** Understand that letters can represent unknown values; Understand and combine like terms to simplify expressions; Solve equations; Substitute numbers for letters in an expression.	Work sheets		**Test (Topic 5)**
6	**Collecting and Displaying Data** Improve the skill of managing information and working with others; Organise data using tally charts; draw bar charts, bar-line graphs, line graphs, pictograms, pie charts; Understand what discrete data is and how to group it; Use Excel to draw charts.	Ch 3, 18, 22	Displaying data	**Homework (Topic 6)**
7	**Symmetry** Understand line symmetry and find lines of symmetry in a shape; Understand rotational symmetry and find the order of rotational symmetry of a shape; Find planes of symmetry in a 3-D shape.	Ch 11	Symmetry around us	
CHRISTMAS EXAMINATION (Topics 1 – 7) including MENTAL ARITHMETIC				

8	**Triangles and Quadrilaterals** Know the sum of angles in a triangle; Construct a triangle using compasses and protractor; Identify and name different types of triangle and quadrilateral.	Ch 12		
9	**Probability** Understand and use the probability scale; Use the correct notation for writing the probability of an event; Understand relative frequency.	Ch 13		
10	**Algebra 2** Multiplying together algebraic terms; More simplification and substitution; Solve equations including a fraction; Solve equations needing more than one step.	Work sheets		**Test (Topic 10)** **Homework (Topics 8–10)** **Investigation – Stairs**
11	**Co-ordinates** Understand that axes show positive and negative numbers; Plot and write down points involving positive and negative co-ordinates; Draw shapes using coordinates.	Ch 16	Rene Descartes	
12	**Fractions, Decimals & Percentages** Understand and use numerators, denominators and equivalent fractions; Write a fraction as a decimal/percentage and vice-versa; Find a fraction of a quantity; Add and subtract fractions and decimals; Understand and use mixed numbers and improper fractions.	Ch 5, 6	Egyptian Fractions	**Test (Topic 12)**
13	**Parallel Lines and Angles** Understand the term 'parallel'; Understand and use corresponding, alternate and interior angles; Solve problems involving these angles.	Ch 15		**Homework (Topics 11–13)** **Test (Topic 13)**
14	**More Decimals – Multiplication & Division** Understand the effect of multiplying/dividing by powers of 10; Multiply & divide decimals; Rounding numbers to a certain number of decimal places.	Ch 7		**Homework (12 & 14)** **Test (Topic 14)**
15	**Metric and Imperial Units** Understand and use metric units of length, weight (mass) and time; Be familiar with the Imperial system; Convert from one metric unit to another.	Ch 8,9	Units of measurement	
SUMMER EXAMINATION (Topics 1 – 15) including MENTAL ARITHMETIC				
16	**Financial Capability – Mobile phones** Use and improve mental maths in everyday decision making; Apply these skills to practical problems using mobile phones.	Work sheets		

Common Assessment Tasks (CATs) are completed by the entire year group, with results recorded centrally. Pupils will also be set other homeworks marked by the teacher and less formal homeworks in their jotters 3 or 4 times per week. **MyMaths** is an online resource which can be used to supplement the work done in class.