Assessment Cycle Year 8 **Set 4**   2016-17   Subject   <u>Mathematics</u>

	Autumn Term 1	Autumn Term 2	Spring Term 1	Spring Term 2	Summer Term 1	Summer Term 2
Key Learning covered this term:	**1 Number properties and calculations** 1.1 Adding and subtracting with larger numbers 1.2 More calculations 1.3 Negative numbers 1.4 STEM: Writing ratios 1.5 Using ratios to solve problems 1.6 Multiplicative reasoning **2 Shapes and measures in 3D** 2.1 3D solids 2.2 Nets of 3D solids 2.3 Surface area 2.4 Volume 2.5 Working with measures	**3 Statistics** **Pi 3:** 3.1 Planning a survey 3.1 Data collection sheets 3.2 Interpreting bar charts 3.3 Drawing bar charts 3.4 STEM: Pie charts **4 Expressions and equations** 4.1 Simplifying expressions 4.2 Functions 4.3 Solving equations 4.4 Using brackets	**5 Decimal calculations** 5.1 Adding and subtracting decimals 5.2 Multiplying decimals 5.3 Ordering and rounding decimals 5.4 STEM: Problem-solving with decimals **6 Angles** 6.1 Measuring and drawing angles 6.2 Vertically opposite angles 6.3 Angles in triangles 6.4 Drawing triangles accurately 6.5 Designing nets	**7 Number properties** 7.1 Squares, cubes and roots 7.2 Calculating with brackets and indices 7.3 LCM and HCF 7.4 Prime factor decomposition	**8 Sequences** 8.1 Generating sequences 8.2 Extending sequences 8.3 Special sequences 8.4 Position-to-term rules 8.5 Finding the nth term **9 Fractions and percentages** 9.1 Comparing fractions 9.2 Fractions of amounts 9.3 Adding and subtracting fractions 9.4 Fractions and percentages 9.5 Calculating percentages 9.6 STEM: Percentages and proportion	**10 Probability** 10.1 The language of probability 10.2 Outcomes 10.3 Probability calculations 10.4 Experimental probability 10.5 FINANCE: Comparing probabilities
Assessment will be	Pre and post topic test. Half term test 45min. 19 question written test out of 40 marks	Pre and post topic test. End of term test 45min. 25 question written test out of 55 marks	Pre and post topic test. Half term test 45min. 21 question written test out of 40 marks	Pre and post topic test. End of term test 45min. 27 question written test out of 55 marks	Pre and post topic test. Half term test 45min. 21 question written test out of 40 marks	Pre and post topic test. End of year exam. Two 1hour papers- non-calculator and calculator totalling out of 100 marks
Revision & How to prepare	Link to Frog for resources/websites to revise websites. online– Mymaths, Pixl maths app, samlearning corbettmaths. Mathsgenie,. mathswatch, all have online activities with worksheets paired for self assessment					
Further Reading	Names of texts Pearsons- KS3 Maths Progress pi two/three http://www.pearsonschoolsandfecolleges.co.uk/Secondary/Mathematics-support/Schemes-of-Work/GCSE-Schemes-of-Work.aspx 2 year KS3 3 year GCSE Scheme of Work, low attainer					

Assessment Cycle Year 8 **Set 1**   2016-17   Subject   <u>**Mathematics**</u>

	Autumn Term 1	Autumn Term 2	Spring Term 1	Spring Term 2	Summer Term 1	Summer Term 2
Key Learning covered this term:	**1 Factors and powers** 1.1 Prime factor decomposition 1.2 Laws of indices 1.3 STEM: Powers of 10 1.4 Calculating and estimating **2 Working with powers** 2.1 simplifying expressions 2.2 More simplifying 2.3 Expanding and simplfying 2.4 Substituting and solving	**3 2D shapes and 3D solids** 3.1 Plans and elevations 3.2 Surface area of prisms 3.3 Volume of prisms 3.4 Circumference of a circle 3.5 Area of a circle 3.6 Cylinders 3.7 Pythagoras' theorem **4 Real life graphs** 4.1 Direct proportion 4.2 FINANCE: Interpreting financial graphs 4.3 Distance-time graphs 4.4 Rates of change 4.5 Misleading graphs	**5 Transformations** 5.1 Reflection and translation 5.2 Rotation 5.3 Enlargement 5.4 More enlargement 5.5 STEM: Combining transformations 5.6 2D shapes and 3D solids **6 Fractions, decimals and percentages** 6.1 Recurring decimals 6.2 Using percentages 6.3 Percentage change 6.4 FINANCE: Repeated percentage change	**7 Constructions and loci** 7.1 Accurate drawings 7.2 Constructing shapes 7.3 Constructions 1 7.4 Constructions 2 7.5 Loci	**8 Probability** 8.1 Comparing probabilities 8.2 Mutually exclusive events 8.3 Estimating probability 8.4 Experimental probability 8.5 Probability diagrams 8.6 Tree diagrams **9 Scale drawings and measures** 9.1 Maps and scales 9.2 Bearings 9.3 Scales and ratio 9.4 Congruent and similar shapes 9.5 Solving geometry problems	**10 Graphs** 10.1 Plotting linear graphs 10.2 The gradient 10.3 $y = mx + c$ 10.4 Parallel and perpendicular lines 10.5 Inverse functions 10.6 STEM: Non-linear graphs
Assessment will be	Pre and post topic test. Half term test 45min. 11 question written test out of 43 marks	Pre and post topic test. End of term test 45min. 16 question written test out of 54 marks	Pre and post topic test. Half term test 45min. 12 question written test out of 35 marks	Pre and post topic test. End of term test 45min. 15 question written test out of 43 marks	Pre and post topic test. Half term test 45min. 9 question written test out of 36 marks	Pre and post topic test. End of year exam. Two 1hour papers- non-calculator and calculator totalling out of 100 marks
Revision & How to prepare	Link to Frog for resources/websites to revise websites. online– Mymaths, Pixl maths app, samlearning corbettmaths. Mathsgenie,. mathswatch, all have online activities with worksheets paired for self assessment					
Further Reading	Names of texts Pearsons- KS3 Maths Progress Delta two/three http://www.pearsonschoolsandfecolleges.co.uk/Secondary/Mathematics-support/Schemes-of-Work/GCSE-Schemes-of-Work.aspx 2 year KS3 3 year GCSE Scheme of Work, high attainer					

Assessment Cycle Year 8 **Set 2 & 3**   2016-17   Subject   <u>**Mathematics**</u>

	Autumn Term 1	Autumn Term 2	Spring Term 1	Spring Term 2	Summer Term 1	Summer Term 2
Key Learning covered this term:	**1 Number** 1.1 Calculations 1.2 Calculating with negative integers 1.3 Powers and roots 1.4 Powers, roots and brackets Theta 3: 2.1 Substituting into expressions 1.5 Multiples and factors **2 Area and volume** 2.1 Area of a triangle 2.2 Area of a parallelogram and trapezium 2.3 Volume of cubes and cuboids 2.4 3D shapes 2.5 Surface area of cubes and cuboids 2.6 Problems and measures	**4 Expressions and equations** 4.1 Algebraic powers 4.2 Expressions and brackets Theta 3: 2.2 Writing expressions and formulae 4.3 Factorising expressions 4.4 One-step equations 4.5 Two-step equations 4.6 The balancing method **5 Real-life graphs** 5.1 Conversion graphs 5.2 Distance-time graphs 5.3 Line graphs 5.4 Complex line graphs 5.5 STEM: Graphs of functions 5.6 More real-life graphs	**6 Decimals and ratio** 6.1 Ordering decimals and rounding 6.2 Place-value calculations 6.3 Calculations with decimals 6.4 Ratio and proportion with decimals 6.5 STEM: Using ratios **7 Lines and angles** 7.1 Quadrilaterals 7.2 Alternate angles and proof 7.3 Geometrical problems 7.4 Exterior and interior angles 7.5 Solving geometric problems	**8 Calculating with fractions** 8.1 Adding and subtracting fractions 8.2 Multiplying fractions 8.3 Fractions, decimals and reciprocals 8.4 Dividing fractions 8.5 Calculating with mixed numbers	**9 Straight-line graphs** 9.1 Direct proportion on graphs 9.2 Gradients 9.3 Equations of straight lines 9.4 STEM: Direct proportion problems **10 Percentages, decimals and fractions** 10.1 Fractions and decimals 10.2 Equivalent proportions 10.3 Writing percentages 10.4 Percentages of amounts 10.5 FINANCE: Solving problems	**3 Statistics, graphs and charts** Theta 3 lesson 3.1 Planning a survey Theta 3 lesson 3.2 Collecting data 3.1 Pie charts 3.2 Using tables 3.3 Stem and leaf diagrams 3.4 Comparing data 3.5 Scatter graphs 3.6 FINANCE: Misleading graphs
Assessment will be	Pre and post topic test. Half term test 45min. 15 question written test out of 43 marks	Pre and post topic test. End of term test 45min. 18 question written test out of 55 marks	Pre and post topic test. Half term test 45min. 11 question written test out of 35 marks	Pre and post topic test. End of term test 45min. 15 question written test out of 43 marks	Pre and post topic test. Half term test 45min. 11 question written test out of 30 marks	Pre and post topic test. End of year exam. Two 1hour papers- non-calculator and calculator totalling out of 100 marks
Revision & How to prepare	Link to Frog for resources/websites to revise websites. online– Mymaths, Pixl maths app, samlearning corbettmaths. Mathsgenie,. mathswatch, all have online activities with worksheets paired for self assessment					

Further Reading	Names of texts Pearsons- KS3 Maths Progress Theta two/three http://www.pearsonschoolsandfecolleges.co.uk/Secondary/Mathematics-support/Schemes-of-Work/GCSE-Schemes-of-Work.aspx 2 year KS3 3 year GCSE Scheme of Work, middle attainer