Key Stage: 3, Y7 set 5

Subject: Mathematics

Aims of the subject:

We aim to develop the full potential of every pupil in Mathematics. We hope that every pupil experiences success and enjoyment in the subject, whether it be equipping them with sufficient Mathematics skills for their day to day life or providing them with a firm foundation for those wishing to pursue Mathematics beyond GCSE. In addition, we hope that we can open our young people's eyes to the creative, imaginative and inspiring world of Mathematics. ,

The Mathematics scheme of learning is divided into units of study consisting of interlinking skills and topics. For each unit of study, pupils will complete a 'common homework' and multiple-choice quizzes. Students will also sit formal assessments three times a year. The 'common homework' will be completed by all the students following this scheme of learning and may take the form of a written task or an online task. In addition to the common homework, pupils will receive homework set by their class teacher. Assessments provide an opportunity for each pupil to demonstrate their ability to recall basic information or perform simple procedures, apply their mathematical understanding to problem solving and contextual problems and to recall information studied in previous units of work.

Year 7

		What will I learn?	What will I do?
Term 1	Unit 1	- Read, write and understand the place value of integers. - Read, write and understand the place value of decimal numbers. - Compare and order integers and decimals incl. using < and >. - Reading information from a scale. - Understand negative numbers in context. - Compare and order negative numbers. - Count forwards and backwards through zero. - Add and subtract negative numbers - Round numbers correct to the nearest 10, 100 and 1000 - Round to any number of decimal places.	Common Homework Multiple Choice Quizzes Autumn Assessment (Unit 1)

	Unit 2	• Add and subtract numbers of any size, mentally and using formal written methods • Add and subtract decimals • Solve problems involving addition and subtraction • Recognise and use the inverse relationships of addition and subtraction • Measure a line correct to the nearest millimetre • Find the perimeter of a 2D shape using a ruler OR counting squares • Find the perimeter of a 2D shape • Find missing lengths when given the perimeter	Common Homework Multiple Choice Quizzes
Term 2	Unit 3	• Multiply and divide by 10, 100 and 1000 • Multiply and divide integers mentally, and using formal written methods • Multiply and divide a decimal by an integer • Show that multiplication is commutative but division is not • Understand and recognise square numbers and associated square roots up to 12 x 12 • Understand the order of operations (BIDMAS) • Understand the terms factor, prime and multiple • Explain with convincing mathematical language whether a number between 0 and 100 is prime or not • Find multiples of a number • Find factor pairs of a number • Find the area of a 2D shape by counting squares. • Find the area of a rectangle using the formula. • Find the missing length of a rectangle when given the area.	Common Homework Multiple Choice Quizzes Spring Assessment (Units 1 - 3)

	Unit 4	• Represent fractions using diagrams and on a number line. • Express one quantity as a fraction of another. • Identify and find equivalent fractions using diagrammatical and numerical methods. • Convert between mixed numbers and improper fractions. • Simplify fractions. • Convert between fractions and decimals. • Add and subtract fractions with the same denominator and when <u>one</u> fraction requires to change. • Calculate the fraction of an amount	Common Homework Multiple Choice Quizzes	
Term 3	Unit 5	• Use conventional terms such as parallel, perpendicular, vertex, edge, face when describing 2D/3D shapes • Identify lines of symmetry on a 2D shape • Identify the order of rotational symmetry on a 2D shape, including order 1 has no rotational symmetry • Classify the properties of 2D (triangles and quadrilaterals) and 3D shapes • Identify and describe types of angles; acute, obtuse, reflex and right angle • Measure and draw acute and obtuse angles correct to the nearest degree using a protractor • Estimate acute and obtuse angles • Know and use the fact that vertically opposite angles are equal • Know and use the fact that angles on a straight line add up to 180˚ • Know and use the fact that angles around a point add up to 360˚ • Know and use the fact that angles in a triangle add up to 180°	Common Homework Multiple Choice Quizzes End of year assessments (U1 – 5)	

	Unit 6	• Interpret and construct frequency tables and tally tables for grouped and ungrouped numerical/categorical data • Interpret and construct bar charts and vertical line graphs for ungrouped numerical/categorical data • Interpret and construct pictograms for grouped and ungrouped numerical/categorical data • Calculate mean, median, mode and range for small sets of data • Tell the time and solve time problem e.g. time intervals. Including 12 and 24 hour clock conversions. • Complete, read and interpret information in tables, including timetables	Common Homework Multiple Choice Quizzes

Note on Assessments: Pupils will sit formal assessments in Autumn and Spring. End of year assessments will typically be sat in June with a final topic quiz during July.

How you can support your child's progress

- Practise mental maths skills i.e. addition, subtraction, multiplication and division
- Seek real life opportunities to challenge your child's mathematical knowledge for example calculating best buys, calculating how many pots of paint required to decorate a room etc.
- Encourage independence in repeated learning of unfamiliar topics and homework support using vle.mathswatch.co.uk/vle

Year 8

		What will I learn?	What will I do?
Term 1	Unit 1	• Read, write and understand the place value of integers. • Read, write and understand the place value of decimal numbers. • Compare and order integers and decimals incl. using < and >. • Reading information from a scale. • Understand negative numbers in context. • Compare and order negative numbers. • Count forwards and backwards through zero. • Add and subtract negative numbers • Round numbers correct to the nearest 10, 100 and 1000 • Round to any number of decimal places.	Common Homework Multiple Choice Quizzes Autumn Assessment (Unit 1)
	Unit 2	• Add and subtract numbers of any size, mentally and using formal written methods • Add and subtract decimals • Solve problems involving addition and subtraction • Recognise and use the inverse relationships of addition and subtraction • Measure a line correct to the nearest millimetre • Find the perimeter of a 2D shape using a ruler OR counting squares • Find the perimeter of a 2D shape • Find missing lengths when given the perimeter	Common Homework Multiple Choice Quizzes

Term 2	Unit 3	• Multiply and divide by 10, 100 and 1000 • Multiply and divide integers mentally, and using formal written methods • Multiply and divide a decimal by an integer • Show that multiplication is commutative but division is not • Understand and recognise square numbers and associated square roots up to 12 x 12 • Understand the order of operations (BIDMAS) • Understand the terms factor, prime and multiple • Explain with convincing mathematical language whether a number between 0 and 100 is prime or not • Find multiples of a number • Find factor pairs of a number • Find the area of a 2D shape by counting squares. • Find the area of a rectangle using the formula. • Find the missing length of a rectangle when given the area.	Common Homework Multiple Choice Quizzes Spring Assessment (Units 1 - 3)
	Unit 4	• Represent fractions using diagrams and on a number line. • Express one quantity as a fraction of another. • Identify and find equivalent fractions using diagrammatical and numerical methods. • Convert between mixed numbers and improper fractions. • Simplify fractions. • Convert between fractions and decimals. • Add and subtract fractions with the same denominator and when one fraction requires to change. • Calculate the fraction of an amount	Common Homework Multiple Choice Quizzes

		• Use conventional terms such as parallel, perpendicular, vertex, edge, face when describing 2D/3D shapes • Identify lines of symmetry on a 2D shape • Identify the order of rotational symmetry on a 2D shape, including order 1 has no rotational symmetry • Classify the properties of 2D (triangles and quadrilaterals) and 3D shapes • Identify and describe types of angles; acute, obtuse, reflex and right angle • Measure and draw acute and obtuse angles correct to the nearest degree using a protractor • Estimate acute and obtuse angles • Know and use the fact that vertically opposite angles are equal • Know and use the fact that angles on a straight line add up to 180˚ • Know and use the fact that angles around a point add up to 360˚ • Know and use the fact that angles in a triangle add up to 180°	Common Homework Multiple Choice Quizzes End of year assessments (U1 – 5)
Term 3	Unit 5		
	Unit 6	• Interpret and construct frequency tables and tally tables for grouped and ungrouped numerical/categorical data • Interpret and construct bar charts and vertical line graphs for ungrouped numerical/categorical data • Interpret and construct pictograms for grouped and ungrouped numerical/categorical data • Calculate mean, median, mode and range for small sets of data • Tell the time and solve time problem e.g. time intervals. Including 12 and 24 hour clock conversions. • Complete, read and interpret information in tables, including timetables	Common Homework Multiple Choice Quizzes

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