

Mathematics Landgate School Long Term Planning KS4 2020-2022

Key Stage 4	<p>Key-Stage 4 Intent: We aim for our Learners to become maths-positive problem-solvers and to have ideas, to develop vocabulary and reasoning skills and so better understand mathematical concepts in the world around them. We aim to ensure learners can build on work done throughout earlier key-stages, and confidently apply their mathematics skills when out in the community to provide them both with the love of mathematics and the independent skills to support them into adulthood.</p> <p>Teaching and assessment at KS4 is personalised for each learner and follows the AQA mathematics units and qualifications to enable everyone to engage, explore, enjoy and succeed in maths.</p> <p>All learners will be encouraged to develop:</p> <ul style="list-style-type: none"> • a willingness and ability to work independently and co-operatively • an ability to understand mathematical ideas and to communicate them in a variety of modes • an appreciation of the ways in which mathematics is used • the knowledge, skills and understanding needed to apply a range of mathematical concepts to situations which may arise in their own lives • an ability to use mathematics across the curriculum • a firm foundation for appropriate further study. <p>AQA mathematics specification provides a broad, coherent, satisfying and worthwhile course of study, encouraging Learners to develop confidence in, and a positive attitude towards mathematics and to recognise the importance of mathematics in their own lives and to society.</p> <p>Key-Stage 4 Opportunities:</p> <p>Learners engage in learning and using vocabulary and problem solving tasks linked to real life and careers wherever possible, then complete assignments when they are ready, helping to keep them motivated. The AQA Entry Level Certificate (ELC) qualification is linear which means assignments submitted are from all eight components that form the assessment at the end of the course:</p> <ul style="list-style-type: none"> • Component 1: Properties of number • Component 2: The four operations • Component 3: Ratio • Component 4: Money • Component 5: The calendar and time • Component 6: Measures • Component 7: Geometry • Component 8: Statistics
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		Year A 2020-2021	Year B 2021-2022
Focus 1	Key Focus:	PROPERTIES OF NUMBER	THE FOUR OPERATIONS
	Key vocabulary list:	Rising Stars Vocabulary p39-40 Incl: 0-20, number, numeral, digit, count on/back, how many? same as, equal to, smallest, biggest, teens, tens, ones, place value, array, sequence, pattern, order	Rising Stars Vocab p40-41, p44 Incl: how many, add, addition, plus, increase, more, and, make, equals, total, altogether, groups, compare, number, quantity, subtract, minus, take away, less, fewer, find the difference
	Key Skills:	See Accreditation Units: Pre-Entry AQA Unit Award: Unit 71856	See Accreditation Units: Pre-Entry AQA Unit Award: Unit 75199
	Key Knowledge:	Showing awareness of counting and number activities Emerging Entry Level AQA Unit Award: Unit 112203 Recognising and using digits 0-20 Addition & Subtraction Entry Level Certificate AQA Award: Component 1: Properties of Number	Numbers from 1 to 3 Emerging Entry Level AQA Unit Award: Unit 3 111708 Maths number Entry Level Certificate AQA Award: Component 2: The Four Operations
Key Opportunities:	This content aims to develop the student's understanding and use of number. Students will learn about place value within whole numbers and will undertake calculations using mental arithmetic and using a calculator. Students will understand the terms odd and even, and rounding will be introduced.	This content aims to develop the student's understanding and use of the four operations. Students will undertake calculations using mental arithmetic involving addition, subtraction, multiplication and division.	
Focus 2	Key Focus:	MONEY	MONEY
	Key vocabulary list:	Rising Stars Vocab p42 Incl: money, coin, penny, pence, pound, notes, price, cost, buy, sell, spend, spent, pay, value, total, altogether, change, difference, more, less, discount, how much?	Rising Stars Vocab p42 Incl: money, coin, penny, pence, pound, notes, price, cost, buy, sell, spend, spent, pay, value, total, altogether, change, difference, more, less, discount, how much?
	Key Skills:	See Accreditation Units: Pre-Entry AQA Unit Award: Unit 70508	See Accreditation Units: Pre-Entry AQA Unit Award: Unit 110960 74848 exploring concept of
Key Knowledge:	Using money in practical social setting with support Emerging Entry Level AQA Unit Award: Unit 73707 Handling money (Unit 1) Entry Level Certificate AQA Award: Component 4: Money	Introduction to coin recognition Emerging Entry Level AQA Unit Award: Unit 111448 Recognising and using money Entry Level Certificate AQA Award: Component 4: Money	

	Key Opportunities:	This content aims to develop the student's understanding and use of money. Students will learn through practical activities about the value of coins in everyday use in the UK. They will convert units of money and use a calculator to do simple calculations of money using decimals.	This content aims to develop the student's understanding and use of money. Students will learn through practical activities about the value of coins in everyday use in the UK. They will convert units of money and use a calculator to do simple calculations of money using decimals.
	Key Focus:	CALENDAR AND TIME	RATIO
	Key vocabulary list:	Rising Stars Vocabulary p42 Incl: <i>time, routine and positional language (first, next, then, now, before, yesterday, today, tomorrow, morning, afternoon, dinner time, playtime, bedtime..), days of the week, months of the year, birthday, holiday, clock, hour, minutes, o'clock, quarter past/to, half past, start, stop, timer</i>	Rising Stars Vocabulary p40-41 Incl <i>Fractions, numerator, denominator, equivalent equal part equal grouping equal sharing parts of a whole half, two halves, one of two equal parts, quarter, two quarters, three quarters (including proper/improper fraction, mixed number, reduced to, decimals, percentages, ratio and proportion where appropriate)</i>
Focus 3	Key Skills:	See Accreditation Units: Pre-Entry AQA Unit Award: Unit 86768	See Accreditation Units: Pre-Entry AQA Unit Award: Unit 81652
	Key Knowledge:	Simple timetable (Objects of ref and symbols) Emerging Entry Level AQA Unit Award: Unit 108196 Telling the time Entry Level Certificate AQA Award: Component 5: Calendar and Time	Recognising halves and quarters of regular shapes Emerging Entry Level AQA Unit Award: Unit 15008/ 111459 Ratio / Fractions Entry Level Certificate AQA Award: Component 3: Ratio
	Key Opportunities:	This content aims to develop the student's understanding and use of 12 and 24 hour time and of calendars and timetables in everyday use. Students will learn how to read digital and analogue clocks, including using roman numerals and learn how to convert between 12 and 24 hour times. They will also learn about days, weeks and months of the year	This content aims to develop the student's understanding of equality and basic fractions
	Key Focus:	STATISTICS	STATISTICS
Focus 4	Key vocabulary list:	Rising Stars Vocabulary p44 Incl: <i>0-20, number, numeral, count, 1s, how many? same as, equal to, smallest, biggest, more than, less than, most, least, altogether, group, set, belong, same, different, chart, related to matching, sorting, classify, handling data</i>	Rising Stars Vocabulary p44 Incl: <i>0-20, number, numeral, count, 1s, how many? same as, equal to, smallest, biggest, more than, less than, most, least, altogether, group, set, belong, same, different, chart, related to matching, sorting, classify, handling data</i>

	<p>Key Skills: See Accreditation Units Pre-Entry AQA Unit Award: Unit 73697</p> <p>Key Knowledge: Exploring classification of colour with support Emerging Entry Level AQA Unit Award: Unit 15022 Maths: Statistics Entry Level Certificate AQA Award: Component 8: Statistics</p>	<p>See Accreditation Units Pre-Entry AQA Unit Award: Unit 85695 Sensory Statistics: Creating a personal preference diagram Emerging Entry Level AQA Unit Award: Unit 10267 Mathematics: Statistics Entry Level Certificate AQA Award: Component 8: Statistics</p>
	<p>Key Opportunities: This content aims to develop the student's understanding and interpretation of simple statistical diagrams. Students will learn how to conduct simple surveys and then analyse and communicate their results. They will also learn to sort information according to set criteria.</p>	<p>This content aims to develop the student's understanding and interpretation of simple statistical diagrams. Students will learn how to conduct simple surveys and then analyse and communicate their results. They will also learn to sort information according to set criteria.</p>
	<p>Key Focus: GEOMETRY – Properties of Shape</p>	<p>MEASURE – height, length, width</p>
	<p>Key vocabulary list: Rising Stars Vocabulary p42-43 <i>Incl: names of 2D 3D shapes, sides, vertices, angles, parallel lines, symmetry, pattern, size, position, direction</i></p>	<p>Rising Stars Vocabulary p41-44 <i>Incl: measure, length, height, long, short, tall, high, far, near, (-er, -est comparatives). (metre, centimetre, millimetre, equipment) estimate, guess, more than, less than, almost, equal to, equivalent, unit,</i></p>
Focus 5	<p>Key Skills: See Accreditation Units: Pre-Entry AQA Unit Award: Unit 105587</p> <p>Key Knowledge: Choosing sensory shapes with support Emerging Entry Level AQA Unit Award: Unit 111458 Maths properties of shape Entry Level Certificate AQA Award: COMPONENT 7: GEOMETRY</p>	<p>See Accreditation Units: Pre-Entry AQA Unit Award: Unit 110170 Size comparisons Emerging Entry Level AQA Unit Award: Unit 112590 Applying knowledge of how to measure Entry Level Certificate AQA Award: Component 6: Measure</p>
	<p>Key Opportunities: This content aims to develop the student's understanding of shapes, coordinates and directions. The student will learn about 2D and 3D shapes and their properties and they will develop an understanding of the size of angles, including right angles. They will also investigate reflective symmetry, nets of solids and use of coordinates.</p>	<p>This content aims to develop the student's understanding and use of measures. Students will learn through practical activities about methods used to measure length, weight and capacity using standard and non-standard units. They will begin to convert units of length, weight and capacity and learn how to read scales of measurement. They will also learn to compare temperature including temperature with negative values.</p>
Focus	<p>Key Focus: GEOMETRY – Position and direction</p>	<p>MEASURE – weight, mass, capacity</p>
	<p>Key vocabulary: Rising Stars Vocabulary p42-43 <i>Incl: names of 2D 3D</i></p>	<p>Rising Stars Vocabulary p41-44 <i>mass, weight, weigh, balances, heavy,</i></p>

	<i>shapes, sides, vertices, angles, parallel lines, symmetry, pattern, size, position, direction</i>	<i>light, heavier than, lighter than heaviest, lightest, scale, container, capacity, volume, full, empty, half, quarter, three-quarters full, holds, estimate, guess, more than, less than, almost, equal to, equivalent, unit,</i>
Key Skills: Key Knowledge	See Accreditation Units: Pre-Entry AQA Unit Award: Unit 110286 82972 Position and relationship between objects Emerging Entry Level AQA Unit Award: Unit 113373 Position and Direction with support Entry Level Certificate AQA Award: Component 7: Geometry	See Accreditation Units: Pre-Entry AQA Unit Award: Unit 85164 Measuring length, mass, capacity (unit 1) Emerging Entry Level AQA Unit Award: Unit 85162 Measuring length, mass, capacity (unit 2) Entry Level Certificate AQA Award: Component 6: Measure
Key opportunities:	This content aims to develop the student's understanding of shapes, coordinates and directions. The student will learn about 2D and 3D shapes and their properties and they will develop an understanding of the size of angles, including right angles. They will also investigate reflective symmetry, nets of solids and use of coordinates	This content aims to develop the student's understanding and use of measures. Students will learn through practical activities about methods used to measure length, weight and capacity using standard and non-standard units. They will begin to convert units of length, weight and capacity and learn how to read scales of measurement. They will also learn to compare temperature including temperature with negative values.