

Curriculum Map						
Subject: Maths						
Year: 8						
	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Knowledge /Skills	Percentages : Percentages of amount, Percentage change	Sequences: Term-to-term rules, Position-to-term rules	Rounding: Significant figures, Estimation.	Standard Form: Standard form and Ordinary numbers, positive and negative indices	Linear Graphs: Plotting straight line graphs, finding equation of straight line graphs	Inequalities: Reading and drawing linear inequalities on number lines, solving linear inequalities.
	Money: Calculating with money - Budgeting project (new job)		Coordinates: Coordinates and mid points	Venn diagrams: Venn diagrams, Factors, multiples and Primes.	Transformations: Translation, reflection	Brackets: Expanding single brackets and simplifying expressions, expanding double brackets.
	Indices: Index Laws	Ratio: Ratio and Scale diagrams. Bedroom Project	Area: Area and Units, Parallelograms, trapezium, compound shapes.	3D shapes: Nets, properties of 3D shapes	Angles: Angle facts, Angles on parallel lines, Angles in polygons	Algebraic fractions: Calculating with fractions, simplifying algebraic fractions by factorising, adding and subtracting algebraic fractions.
	Equations: Solving linear equations, equations involving brackets, unknown on both sides.		Circles: Area and Circumference	Surface area and Volume: Surface area from nets, surface area of cubes, cuboids, compound shapes, Volume of compound shapes, Prisms.	Statistical diagrams: Piecharts, line graphs, stem- and - leaf diagrams, averages from diagrams.	Recurring decimals: Converting fractions to recurring decimals.
Skills	Converting between fractions, decimals and percentages, fractions of an amounts with and without a calculator	Use of number lines, adding and subtracting negative numbers, multiplying and dividing negative numbers. Term to	Rounding to decimal places, rounding to significant figures, understanding of place value. Reading and plotting coordinates	use of place value for standard form, power of ten , positive and negative powers. Writing probabilities as fractions, decimals and	Plotting horizontal and vertical lines, finding the equation of a line, by substituting in values, reading coordinates.	Reading and drawing number lines, solve one and two step equations. Simplifying expressions, multiplying

<p>Key Questions</p>	<p>Where is percentage change used, does it matter if we take the original amount from the new? Why do we use the reciprocal to represent indices? why does the addition rule work?, why is it important to use the balancing method?</p>	<p>https://static.sparxhomework.uk/assets/sparx-resources/Sparx_Year_8_Term1_Deepen_Ratio.pdf . In what aspects of real life are scale drawings used? can you create a plan of a bedroom using scale drawings?</p>	<p>Where might we use estimation in real life?, why do we plot along the x axis first? When working out areas of shapes why is it important that all sides have the same units? what is the relationship between the diameter and circumference? what is pi?</p>	<p>Where is standard form used in real life? how do we represent data that sits in both data sets? Can you draw a net of any shape? Why is it important to work out the area of each component of a compound shape? what are the units of surface area?</p>	<p>What is the gradient? What is the why intercept? how can we identify a reflection line? What is the rule for interior angles of a polygon, can this be used for irregular polygons? How can you identify a parallel line? Which type of chart is best to represent the given data?</p>	<p>What is the difference between less than and equal to and less than?, why is it important to keep the sign in front of the term together when simplifying? How do we represent a recurring decimal?</p>
<p>Assessment</p>	<p>Students sit an end of term test at the end of each term, these are marked by the teacher and a full ReACT to the test is completed in lesson, teachers will use a visualiser to model the answers and identify marks and common misconceptions. Continued low stake questioning in class. Peer mentoring. AFL whiteboards and encouragement</p> <p>AO1: Use and apply standard techniques Students should be able to:</p> <ul style="list-style-type: none"> -accurately recall facts, terminology and definitions. -use and interpret notation correctly. -accurately carry out routine procedures or set tasks requiring multi-step solutions. <p>AO2: Reason, interpret and communicate mathematically Students should be able to:</p> <ul style="list-style-type: none"> -make deductions, inferences and draw conclusions from mathematical information. -construct chains of reasoning to achieve a given result interpret and communicate information accurately. -present arguments and proofs. -assess the validity of an argument and critically evaluate a given way of presenting information. <p>AO3: Solve problems within mathematics and in other contexts Students should be able to:</p> <ul style="list-style-type: none"> -translate problems in mathematical or non-mathematical contexts into a process or a series of mathematical processes. -make and use connections between different parts of mathematics. -interpret results in the context of the given problem. -evaluate methods used and results obtained. -evaluate solutions to identify how they may have been affected by assumptions made. 					

<p>Literacy/ numeracy/ SMSC/ Character</p>	<p><u>Literacy:Key word as above, additional knowledge organisers provided to students at the beginning of a new topic , collins dictionary definitions shared https://www.collinsdictionary.com/word-lists/mathematics-mathematical-terms. Knowledge organisers will be stuck into books at the beginning of every new topic, to promote literacy and key vocabulary and skills.</u></p> <p><u>Freya Model, defining mats:(definition, facts, examples and non examples, including misconceptions). VCOP support models to aid students in using connectives and other language devices to explain a mathematical model or compare data. https://www.missbsresources.com/maths-resources/literacy-within-mathematics</u></p> <p><u>Numeracy:Key skills are outlined</u></p> <p><u>Character/SMSC:https://www.bbc.co.uk/bitesize/tags/zrsg6v4/jobs-that-use-maths/1 links to jobs that relate to maths are relayed regularly in lessons, opportunities for cross curricular links outlined in scheme of work.</u></p> <p><u>Oracy: encourage teacher-led discussion with equal emphasis on speaking and listening. Group work/paired work. Teacher models correct mathematical processes. Opportunities for logical reasoning and dialogue e.g via Inquiry Maths and reasoning/proof tasks. No hands up questioning approached used</u></p>
<p>Enrichment opportunities and futures</p>	<p>Intermediate maths challenge Revision sessions after school STEM club Statistics project -Real life application to collate and analyse data Maths buddies- opportunities to work with different ages groups and ability Trips, outside speakers and futures links within curriculum.</p>