

LONG TERM PLAN 2023/2024

YEAR GROUP: Year 9

SUBJECT: Mathematics

<b>Week Start</b>	<b><u>Content Description</u></b>	<b><u>Assessment</u></b>	<b><u>Events</u></b>
<b>September</b>			
3rd	<p>Topic 1 Chapter 1 Number and Language</p> <ul style="list-style-type: none"><li>Identify and use natural numbers, integers, prime numbers, square and cube numbers, common factors and common multiples, rational and irrational numbers, real numbers, reciprocals.</li><li>Calculate with squares, square roots, cubes and cube roots and other powers and roots of numbers.</li><li>Use directed numbers in practical situations</li></ul>	Questioning, Peer discussion	
10 <sup>th</sup>	<p>Chapter 2 Accuracy</p> <ul style="list-style-type: none"><li>Make estimates of numbers, quantities, and lengths, give approximations to specified numbers of significant figures and decimal places and round off answers to reasonable accuracy.</li><li>Give appropriate upper and lower bounds for data given to a specified accuracy.</li></ul>	Students' reflection, Unit Test	10-14 <sup>th</sup> CEM Assessments (7,9 & 11) 14 <sup>th</sup> Target Grades Deadline (8,10, 12) 14 <sup>th</sup> Year 7 Picnic
17 <sup>th</sup>	<p>Chapter 3 Calculations and order</p> <ul style="list-style-type: none"><li>Order quantities by magnitude and demonstrate familiarity symbols.</li><li>Use a calculator efficiently.</li><li>Apply appropriate checks of accuracy.</li></ul>	Classroom discussion	17-20 <sup>th</sup> CEM Assessments (7,9 & 11)
24 <sup>th</sup>	<p>Chapter 4 Integers, fractions, decimals, and percentages</p> <ul style="list-style-type: none"><li>Use language and notation of simple vulgar and decimal fractions and percentages in appropriate contexts. Recognize equivalence and convert between these forms.</li><li>Use the four rules for calculations with whole numbers, decimals, and fractions (including mixed numbers and improper fractions), including</li></ul>	Students' reflection, Unit Test 2	28 <sup>th</sup> Prophet's Birthday - Observed

	correct ordering of operations and use of brackets.		
<b>October</b>			
1st	Chapter 5 Further percentages <ul style="list-style-type: none"> <li>• Calculate a given percentage of a quantity.</li> <li>• Express one quantity as a percentage of another.</li> <li>• Calculate percentage increase or decrease.</li> </ul>	Questioning, Peer discussion	4 <sup>th</sup> Swimming Gala 5 <sup>th</sup> Armed Forces Day
8 <sup>th</sup>	Chapter 6 Ratio and proportion <ul style="list-style-type: none"> <li>• Demonstrate an understanding of ratio and proportion.</li> <li>• Calculate average speed.</li> <li>• Use common measures of rate.</li> </ul>	Classroom discussion	8 <sup>th</sup> Target Grade Deadline (7,9,11) 10 <sup>th</sup> Careers Day
15 <sup>th</sup>	Chapter 7 Indices and standard form <ul style="list-style-type: none"> <li>• Understand the meaning of indices (fractional, negative and zero)</li> </ul> Chapter 12 Algebraic indices <ul style="list-style-type: none"> <li>• Use and interpret positive, negative, and zero indices.</li> <li>• Use and interpret fractional indices.</li> <li>• Use the rule of indices.</li> </ul>	Unit test 3	
22 <sup>nd</sup>	Half Term Break		
29 <sup>th</sup>	Chapter 8 Money and Finance <ul style="list-style-type: none"> <li>• Calculate using money and convert from one currency to another.</li> <li>• Use given data to solve problems on personal and household finance involving earnings, simple interest, and compound interest. Extract data from tables and charts.</li> <li>• Use exponential growth and decay in relation to population and finance.</li> </ul> Chapter 9 Time <ul style="list-style-type: none"> <li>• Calculate times in terms of the 24 - hour and 12-hour clock.</li> <li>• Read clocks, dials, and timetables.</li> </ul>	Students' reflection, Questioning	31 <sup>st</sup> Orange and Black Day
<b>November</b>			
5 <sup>th</sup>	Chapter 10 Set notation and Venn diagrams <ul style="list-style-type: none"> <li>• Use language, notation, and Venn diagrams to describe sets and represent relationships between sets.</li> </ul>	Students' reflection, Questioning, Unit test 4	
12 <sup>th</sup>	Topic 2: Chapter 11 Algebraic representation and manipulation	Classroom discussion	

	<ul style="list-style-type: none"> <li>• Use letters to express generalise numbers and express basic arithmetic process processes algebraically.</li> <li>• Substitute numbers for words and letters in complicated formulae.</li> <li>• Construct and rearrange complicated formula and equations.</li> </ul>		
19 <sup>th</sup>	<p>Chapter 11 Algebraic representation and manipulation</p> <ul style="list-style-type: none"> <li>• Manipulate directed numbers.</li> <li>• Use brackets and extract common factors.</li> <li>• Expand products of algebraic expressions.</li> <li>• Manipulate algebraic fractions. Factorise and simplify rational expressions.</li> </ul>	Unit test 5	AP1 Written Comments Deadline
26 <sup>th</sup>	Review and AP1	Questioning	
<b>December</b>			
3 <sup>rd</sup>	Review	AP1 assessment	4 <sup>th</sup> First Day AP1 Exams
10 <sup>th</sup>	<p>Topic 4 Chapter 22 Geometrical vocabulary and construction</p> <ul style="list-style-type: none"> <li>• Use and interpret the geometrical terms: point, line, parallel, bearing, right angle, acute, obtuse, and reflex angles, perpendicular, similarity and congruence.</li> <li>• Use and interpret vocabulary of triangles, quadrilaterals, circles, polygons, and simple solid figures including Nets.</li> </ul>	Questioning, Peer discussion	15 <sup>th</sup> Last Day AP1 Exams
17 <sup>th</sup>	<p>Chapter 23 similarity and congruence</p> <ul style="list-style-type: none"> <li>• Measure and draw lines and angles.</li> <li>• Construct a triangle given the three lines using ruler and pair of compasses only.</li> <li>• Read and make scale drawings.</li> </ul>	Students' reflection, Questioning	22 <sup>nd</sup> Winter Break
25 <sup>th</sup>	Winter Break		
<b>January</b>			
1 <sup>st</sup>	Winter Break		
7 <sup>th</sup>	Chapter 24 symmetry	Unit test 1	8 <sup>th</sup> First Day

14 <sup>th</sup>	Chapter 25 Angle properties	Classroom discussion	
21 <sup>st</sup>	Chapter 25 Angle properties	Students' reflection, Questioning, Unit test 2	25 <sup>th</sup> National Holiday
28 <sup>th</sup>	Chapter 13 Equations and inequalities <ul style="list-style-type: none"> <li>Derive and solve simple linear equations in one unknown.</li> <li>Derive and solve simultaneous linear equations in two unknowns.</li> </ul>		
<b>February</b>			
4 <sup>th</sup>	Chapter 13 Equations and inequalities <ul style="list-style-type: none"> <li>Derive and solve quadratic equations by factorization, completing the square or by use of the formula</li> </ul>	Students' reflection, Questioning, Unit test 3	
11 <sup>th</sup>	Chapter 13 Equations and inequalities <ul style="list-style-type: none"> <li>Derive and solve simultaneous equations, involving one linear and one quadratic.</li> <li>Derive and solve linear inequalities.</li> </ul>	Questioning, Peer discussion	
18 <sup>th</sup>	Chapter 15 Sequences <ul style="list-style-type: none"> <li>Continue a given number sequence.</li> <li>Recognise patterns in sequences including the term-to-term rule and relationships between different sequences.</li> <li>Find the <math>n</math>th term of sequences.</li> </ul>	Class Discussion	21-22 <sup>nd</sup> Half Term
25 <sup>th</sup>	Chapter 16 Proportion <ul style="list-style-type: none"> <li>Express direct and inverse proportion in algebraic terms I can use this form of expression to find unknown quantities.</li> </ul>	Students' reflection, Questioning	
<b>March (10<sup>th</sup> Ramadan Starts)</b>			
3 <sup>rd</sup>	Chapter 20 Functions <ul style="list-style-type: none"> <li>Estimate gradients of curves by drawing tangents.</li> </ul>	Unit test 4	
10 <sup>th</sup>	Topic 3 Chapter 21 Straight line graphs <ul style="list-style-type: none"> <li>demonstrate familiarity with Cartesian coordinates in two dimensions.</li> <li>Find the gradient of a straight line. Next time calculate the gradient of a straight line from the coordinates of two points on it.</li> </ul>	Students' reflection, Questioning	
17 <sup>th</sup>	Chapter 21 Straight line graphs	Questioning, Peer discussion	

	<ul style="list-style-type: none"> <li>calculate the length under coordinates of the midpoint of a straight line from the coordinates of its endpoints.</li> <li>Interpret and obtain the equation of a straight- line graph in the form <math>Y = mx+c</math>.</li> </ul>		
24 <sup>th</sup>	Chapter 21 Straight line graphs <ul style="list-style-type: none"> <li>Determine the equation of a straight line parallel to a given time.</li> <li>Find the gradient off parallel and perpendicular lines.</li> </ul>	Students' reflection, Questioning	
April			
31 <sup>st</sup>	Chapter 17 Graphs in practical situations <ul style="list-style-type: none"> <li>Use function notation to describe simple functions.</li> <li>Find inverse functions.</li> <li>Phone composite functions</li> <li>Construct tables of values and draw graphs for functions of the form <math>axn</math> (and simple sums of these) and functions of the form <math>bx</math>.</li> <li>Soul associated equations approximately, including finding and interpreting roots by graphical methods.</li> <li>Draw and interpret graphs representing exponential growth I'm decay problems.</li> <li>Recognise, sketch, and interpret graphs of functions.</li> </ul>	Students' reflection, Questioning	
7 <sup>th</sup>	Chapter 18 Graphs of functions <ul style="list-style-type: none"> <li>interpret and use graphs in practical situations including travel graphs and conversion graphs. Draw graphs from given data.</li> <li>Apply the idea of rates of change too simple kinematics involving distance-time and speed-time graphs, acceleration, and deceleration.</li> <li></li> </ul>	Classroom discussion	10-11 <sup>th</sup> Eid Holiday
14 <sup>th</sup>	Chapter 18 Graphs of functions <ul style="list-style-type: none"> <li>Apply the idea of rates of change too simple kinematics involving distance-time and speed-time graphs, acceleration, and deceleration.</li> <li>Calculate distance travelled as area and that linear speed- time graph.</li> </ul>	Unit test 5	

21 <sup>st</sup>	Chapter 26 Measures <ul style="list-style-type: none"> <li>Use current units of mass, length, area, phone you and capacity in practical situations and express quantities in terms of larger or smaller units.</li> </ul>	Students' reflection, Questioning	25 <sup>th</sup> Spring Break
28 <sup>th</sup>	Chapter 26 Measures Use current units of mass, length, area, phone you and capacity in practical situations and express quantities in terms of larger or smaller units.		
<b>May</b>			
5 <sup>th</sup>	Chapter 27 Perimeter, Area, and Volume <ul style="list-style-type: none"> <li>Carry out calculations involving the perimeter and area l've a rectangle, triangle, parallelogram and trapezium and compound shapes derived from these.</li> <li>Carry out calculations involving the circumference and area of a circle.</li> <li>Solve problems involving the arc length and sector area as fractions of the circumference and area of a circle.</li> </ul>	Questioning, Peer discussion	7 <sup>th</sup> Start of Term 2
12 <sup>th</sup>	Chapter 27 Perimeter, Area, and Volume <ul style="list-style-type: none"> <li>Carry out calculations involving the volume of a cuboid, present and cylinder and the surface area of a cuboid and a cylinder.</li> <li>Carry out calculations involving the surface area and volume of a sphere, permits and cone.</li> <li>Carry out calculations involving the areas and volumes of compound shapes.</li> </ul>	Revision guide	
19 <sup>th</sup>	Review	Graded Homework	
26 <sup>th</sup>	Review		
<b>June</b>			
2 <sup>nd</sup>	Introduction to year 10 curriculum		6 <sup>th</sup> End of year assembly
9 <sup>th</sup>	introduction to year 10 curriculum		12 <sup>th</sup> Last day for Students 13 <sup>th</sup> Last day for Teachers
<b>End of Year</b>			
<b><u>Additional Notes:</u></b>			

