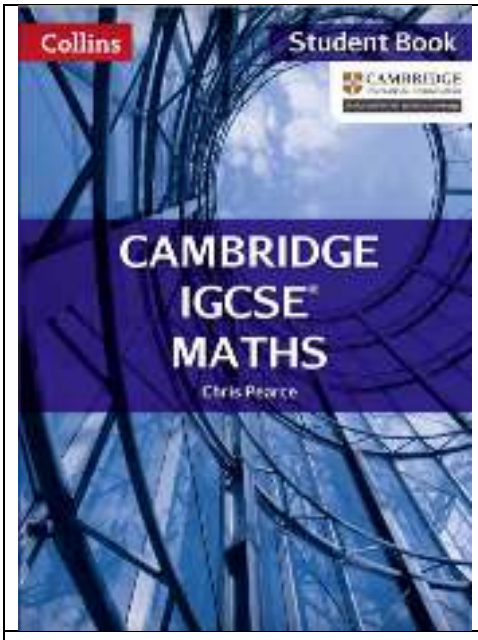
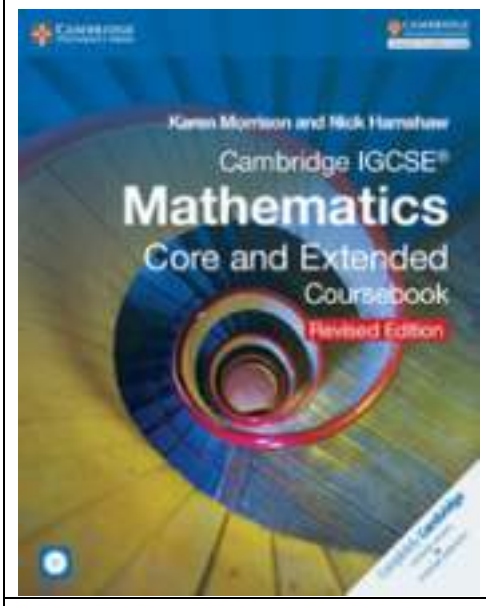
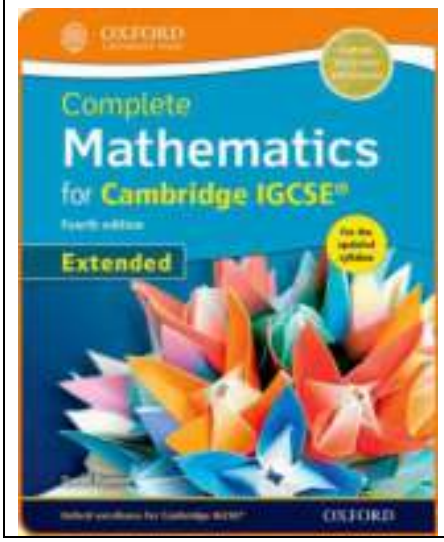
Grade 9 Mathematics – We will be learning…

Term 1	Term 2	Term 3	Working towards
We will be following the Cambridge IGCSE Core and Extended curriculum. Within these units we will learn: **Fractions** Fractions, ratios and percentages Operations implying fractions Percentages Standard form Estimation **Reviewing number concept. Problem solving** Revision of multiples, factors and primes Composite numbers Powers and roots Working with directed numbers Rounding numbers and Order of operations **ALGEBRA** **Making sense of algebra.** Using letters to represent unknown values Substitution Simplifying expressions Working with brackets **Equations and transforming formulae.** Further expansion of brackets Solving linear equations Factorising algebraic expressions	Within these units we will learn: **Sequences and sets.** Sequences Rational and irrational numbers Sets Quadratic sequences **Ratio, rate and proportion.** Rates of change Ratio and scale Kinematic graphs Direct and inverse proportion in algebraic terms Increasing and decreasing amounts by a given ratio **Understanding measurement.** Understanding units Change of units Upper and lower bounds Conversion graphs **Managing money.** Borrowing and investing money Buying and selling Compound interest using formula **GEOMETRY** **Lines, angles and shapes.** Lines and angles Triangles Quadrilaterals Polygons Circles Construction Students will complete activities such as:	Within these units we will learn: **Perimeter, area and volume.** Perimeter and area in 2 dimensions Three-dimensional objects Surface areas and volume of solids **Symmetry and LOCI.** Symmetry in two dimensions Symmetry in three dimensions Symmetry properties of circles Angle relationship in circles Loci **Scale drawings, bearings and trigonometry.** Scale drawings Bearing Understand the tangent, cosine and sine ratios Solving problems using trigonometry Angles between 90 and 180 degrees **Pythagoras theorem and similar shapes.** Pythagoras' theorem Understanding similar triangles Understanding similar shapes Understanding congruence Students will complete activities such as: Worksheets related to the topic and structured by levels of understanding	Full practice exams for core and extend using iGCSE past papers. These will occur at the end of term 1 and term 2 to show the progress made prior to the examined Mathematics iGCSE. Introduction of Mathematical language and meaning of symbols.

Transformation of a formula Students will complete activities such as: Worksheets related to the topic and structured by levels of understanding Problem solving activities to deepen into their mathematical vocabulary as well as the application of Maths to different kinds of problems. At least one activity, text or problem related to real world skills. At least once a week starter related to previous topics to reinforce the memory. Teachers will use tasks to assess core module learning objectives and monitor progress. At the end of the unit students will complete an "Exit Point", it means, a short assessment to help teachers evaluate student's progress throughout the unit.	Worksheets related to the topic and structured by levels of understanding Problem solving activities to deepen into their mathematical vocabulary as well as the application of Maths to different kinds of problems. At least one activity, text or problem related to real world skills. At least once a week starter related to previous topics to reinforce the memory. Teachers will use tasks to assess core module learning objectives and monitor progress. At the end of the unit students will complete an "Exit Point", it means, a short assessment to help teachers evaluate student's progress throughout the unit.	Problem solving activities to deepen into their mathematical vocabulary as well as the application of Maths to different kinds of problems. At least one activity, text or problem related to real world skills. At least once a week starter related to previous topics to reinforce the memory. Teachers will use tasks to assess core module learning objectives and monitor progress. At the end of the unit students will complete an "Exit Point", it means, a short assessment to help teachers evaluate student's progress throughout the unit.	

Books you may find useful:

	Collins Cambridge IGCSE - Cambridge IGCSE • **ISBN: 978-0-00-815037-2**
	**Cambridge IGCSE Mathematics Core and Extended** **ISBN:**9781316605639
	**Complete Mathematics for Cambridge IGCSE® Revision Guide** • **ISBN-10:** 0199154872 • **ISBN-13:** 978-0199154876