Welcome to Year 10 Maths

At WBS, we run a 3 year GCSE Maths course with one clear aim - success for everyone. The content is diverse, engaging and essential in equipping students with the right skills to reach their future destination, whatever that may be. Year 10 is all about consolidating the knowledge you developed in Year 9 and then expanding it into more complex areas. The content is more diverse in Year 10 than any other year as we tackle many of the areas of Maths which you may be examined on at the end of Year 11.

Topics covered include:

- Simultaneous Equations
- Circle Theorems
- Percentage Change
- Highest Common Factors and Lowest Common Multiples
- Surds
- Inequalities
- Volume & Surface Area of 3D Shapes

Assessment and Feedback

There are regular assessments in Maths that will help to track your progress, and inform teachers and parents of how you are performing against your targets. These take place at the end of each Unit and are generally 40 mark tests. They are reflective of the nature of questions you will see in your real GCSE examination.

There are 9 Units in Year 10 Maths. When you have completed a test, it will be marked by your teacher and there will be a review lesson to follow up on the test. You will then be set a review homework which will be targeted at the individual areas where you have struggled.

At the end of Year 10, you will sit a GCSE style examination and the results from this will contribute towards setting for Year 11.

Classwork

Your books are periodically checked by your teacher to ensure that you are:

- Keeping appropriate notes & methods as shown by your teacher
- Presenting your work clearly and neatly, showing logical, mathematical steps
- Drawing margins & underlining titles
- Marking your own work and/or that of your peers using a different colour
- Not doodling in your book or tearing out pages

Homework

A range of homework tasks will be set by your teacher. They will include both online (MyMaths, Kerboodle) and offline tasks. Your feedback will be given in a variety of ways, including through BrightSpace and also written feedback which can be placed into your progress folder.

Exams

You will sit 3 terminal exams at the end of the GCSE Course (end of Year 11). Paper 1 is non-calculator and Papers 2-3 are calculator papers. Each of these papers are worth 80 marks and last 1 hour and 30 minutes.

The West Bridgford School Mathematics Department
Scheme of Work - 2018 Onwards - Summary Sheet
GCSE - YEAR 10

TIMETABLE PROMOTION (5 WEEKS)

WEEKS 1-5 LINEAR GRAPHS & SIMULTANEOUS EQUATIONS

Support	Foundation	Intermediate	Higher
Coordinates	Gradient & Intercept	Midpoints & Line Length (Pythagoras)	Negative Reciprocal
	Gradient of Parallel Lines	Sketching Linear Graphs	
	y = mx + c	Solving Simultaneous Equations Graphically	Equations of Normals
Plotting Graphs	Distance Time Graphs	Linear Simultaneous Equations - Algebraic	
	Speed Time Graphs		Parallel & Perpendicular Lines
Midpoints & Line Length	Simultaneous Equations	Kinematics Graphs	
	Rearranging Simple Formulae		

AUTUMN TERM (15 WEEKS)

WEEKS 1-4 MEASURES & ACCURACY

Support	Foundation	Intermediate	Higher
Estimating Calculations	Entering Fractions, Brackets & Powers on a Calculator	Using Significant Figures to make Estimations	
Rounding Decimals	Upper & Lower Bounds		
Using a Calculator	Significant Figures	Upper & Lower Bounds with Calculations	
Trial & Improvement	Speed		
	Density		

WEEKS 5-9 CIRCLES & CONSTRUCTIONS

Support	Foundation	Intermediate	Higher
Constructing Triangles	Area of a Circle	Arcs, Sectors & Segments	Proving Circle Theorems
	Circumference of a Circle		
	Constructing Shapes	Circle Theorems	Intersecting Chords
	Drawing Loci		

WEEKS 10-13 RATIO & PROPORTION

Support	Foundation	Intermediate	Higher
Simple Proportion	Simple Interest Rates	Repeated Percentage Change	Worded Percentage Change Problems including Reverse Percentages, Compound Interest and Difficult 'Best Buy' Scenarios
Map Scales	Percentage Change		
Convert between FDP	Change as a Percentage		
	Sharing in Ratios	Reverse Percentages	
Sharing in Ratios	Unitary Method		

WEEKS 14-15 FACTORS, POWERS & ROOTS (see below)

SPRING TERM (11 WEEKS)

WEEKS 1-2 FACTORS, POWERS & ROOTS

Support	Foundation	Intermediate	Higher
Factors & Primes	Higher Powers	Surds	Rationalising the Denominator
Squares & Cubes		Pythagoras	
LCM & HCF			

WEEKS 3-8 LINEAR EQUATIONS & INEQUALITIES

Support	Foundation	Intermediate	Higher
Multi-Step Linear Equations	Equations with Variables on Both Sides	Solving Equations with Graphs	Solving Equations with Linear Algebraic Fractions
	Forming & Solving Linear Equations	Solving Worded Equations	
	Solving Equations with Fractions	Shading Linear Inequalities Graphically	
	Expanding Single Brackets		
	Solving Equations with Brackets		
Plotting Line Graphs	Representing Inequalities on a Number Line	Problem Solving with Algebra (Area/Perimeter/Scenario Based etc)	
	Forming & Solving Linear Inequalities		

WEEKS 9-11 WORKING IN 3D

Support	Foundation	Intermediate	Higher
3D Shapes	Plans & Elevations	Complex Surface Areas	Volume of Frustums
Nets of 3D Shapes	Volume of Cylinders & Prisms		
Volume of Cuboids	Surface Area	Volume of Cones, Pyramids & Spheres	
	Density		

SUMMER TERM (8 WEEKS)

WEEK 1 WORKING IN 3D (see above)

WEEKS 2-5 HANDLING DATA 2

Support	Foundation	Intermediate	Higher
Reading Line Graphs & Two-Way Tables	Grouping Data	Time Series	Moving Averages
	Scatter Graphs & Correlation	Histograms	
Frequency Tables & Bar Charts	Line of Best Fit	Cumulative Frequency	
	Averages from Frequency Tables	Box & Whisker Plots	

WEEKS 6-8 CALCULATIONS 2

Support	Foundation	Intermediate	Higher
Higher Powers	Exact Calculations	Calculations with Standard Form	Rationalising the Denominator
	Dividing Fractions		
	Index Laws (Multiplication, Division, Brackets)	Simplifying Surds	Manipulation of Powers (see below)
	Multiplying Fractions		
Adding & Subtracting Fractions	Writing Numbers in Standard Form	Negative & Fractional Powers	$8^3 = (2^3)^3 = 2^9$
	4 Operations with Mixed Numbers		