# Welcome to Year 11 Maths

As you reach Year 11, your Mathematics studies become more and more focused on achieving success in your GCSE examinations. For this reason, large portions of the year will focus on achieving fluency and confidence in the most challenging topics within the course. These are also the topics will give you the greatest preparation for A-Level Maths as they form the bedrock of that content. Topics studied this year include:

- Pythagoras, Trigonometry & Vectors
- Quadratic Graphs, Equations & Inequalities
- Venn Diagrams and Conditional Probability
- Direct & Inverse Proportion
- Understanding the most challenging Algebra, Graphs & Functions

**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 5 Units in Year 11 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.

In the Spring Term, you will sit a Mock Exam and the results from this exam will be used to inform final decisions on Tier of Entry for the GCSE examination.

**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 11

### TIMETABLE PROMOTION (5 WEEKS)
### WEEKS 1-5 PYTHAGORAS, TRIGONOMETRY & VECTORS

| Support | Foundation | Intermediate | Higher |
|---|---|---|---|
| Squares & Cubes | Pythagoras | Surds | Sine Rule |
| | Missing Angles & Sides | Angles of Elevation & Depression | Cosine Rule |
| | SOHCAHTOA | | Vectors |

### YEAR 10 into 11 GCSE MOCK within TT PROMO

### AUTUMN TERM (15 WEEKS)
### WEEKS 1-7 QUADRATIC GRAPHS, EQUATIONS & INEQUALITIES

| Support | Foundation | Intermediate | Higher |
|---|---|---|---|
| Coordinates | Plotting Quadratics | Difference of Two Squares | Using the Quadratic Formula |
| | Expanding Double Brackets | Identities | Using the Discriminant |
| | Factorising Quadratics | Solving Quadratic Equations Graphically | |
| | Solving Quadratics by Factorising | Graphs in Completed Square Forms | Solving Quadratic Inequalities |
| | Solving Quadratics by Plotting Graphs | Completing the Square | |
| | | Sketching Quadratics | Quadratic Simultaneous Equations |
| | Cancelling Algebraic Fractions | Adding & Subtracting Algebraic Fractions | |

### WEEKS 8-10 PROBABILITY OF COMBINED EVENTS

| Support | Foundation | Intermediate | Higher |
|---|---|---|---|
| Venn Diagrams | Tree Diagrams | | |
| Set Notation & The Language of Probability | The OR Rule | Conditional Probability | |
| Listing Outcomes & Two Way Tables | The AND Rule | | |

### WEEK 11 - Grade 5 Test for Foundation Groups
### WEEKS 12-15 UNITS & PROPORTIONALITY

| Support | Foundation | Intermediate | Higher |
|---|---|---|---|
| Square & Cubic Units | Speed | Exponential Graphs | Exponential Growth & Decay |
| | Density | | |
| | Conversion Graphs | Direct & Inverse Proportion | Exponential Functions |
| Unitary Method | Metric Conversion | | |
| | Compound Interest | Area & Volume Scale Factors | Construct & Interpret Equations requiring Direct & Indirect Proportion |
| | Gradient & Intercept | | |

### SPRING TERM (11 WEEKS)
### WEEKS 1-6 FURTHER ALGEBRA

| Support | Foundation | Intermediate | Higher |
|---|---|---|---|
| Real Life Graphs | Recognising Quadratics, Cubics & Reciprocals | Reciprocal Graphs | Exponential Graphs |
| | | Iteration | Equations of Circles |
| | | Rearranging Complex Formulae | Transforming Graphs |
| | | | Transforming Trig Graphs |
| | Distance Time Graphs | Function Notation | Inverse Functions |
| | | | Composite Functions |

### WEEKS 7-8 REVISION & MOCK EXAMS

### WEEKS 9-11 REVISION - PAST PAPERS, REVISITING PROBLEM AREAS, STRETCH AND EXTEND WHERE POSSIBLE

### SUMMER TERM (4 WEEKS)

### REVISION - PAST PAPERS, REVISITING PROBLEM AREAS, STRETCH AND EXTEND WHERE POSSIBLE