Year 11 LONG-TERM SEQUENCE for MATHS

Bishop Milner CATHOLIC COLLEGE

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The curriculum for this stage of students' education has been designed to prepare them for their final exam as well as providing the opportunity to access mathematics from the next stage of study. During the first term students will develop their graph interpretation skills by using distance and velocity time graphs to calculate speed, distance and acceleration. Students will also study transformations of graphs as well as iterations which are both fundamental aspects of A level mathematics. Throughout the year, students will be exposed to regular exam questions and exam papers to prepare them fully for their exam at the end of the year. Underpinning the curriculum areas, will be the opportunity to explore how the skills they are developing can be used in real life situations and applied to problem solving questions.

HALF TERM 1: ALGEBRA

STUDENTS MUST KNOW:

How to calculate angle and lengths of non-right-angled triangles including

- Sine rule.
- Cosine rule.
- Area of a non-right-angled triangle.

How to interpret a real-life graph including

- Distance time graphs.
- Velocity time graphs.
- Calculating rates of change.

HOW THIS WILL BE ASSESSED:

A GCSE exam paper will be completed each week and feedback provided, as well as assessments at the end of each topic.

HALF TERM 2: ALGEBRA

STUDENTS MUST KNOW:

How to manipulate algebraic fractions and functions including

- The four operations with algebraic fractions.
- Solving equations containing algebraic fractions.
- Composite functions.
- Inverse functions.

The importance of vectors in describing mathematical movement including

- Addition and subtraction of vectors.
- Solving geometrical problems involving vectors.

HOW THIS WILL BE ASSESSED:

A GCSE exam paper will be completed each week and feedback provided, assessments at the end of each topic and a whole school mock exam.

HALF TERM 3: NUMBER AND ALGEBRA REVISION

STUDENTS MUST KNOW:

The fundamental aspects of algebra including

- Solving equations.
- Rearranging equations.
- Properties of graphs.
- Algebraic fractions.

The fundamental aspects of number including

- Percentages including using multipliers to calculate interest.
- The four operations with decimals and fractions including real life problems.

HOW THIS WILL BE ASSESSED:

A GCSE exam paper will be completed each week and feedback provided.

HALF TERM 4: GEOMETRY, STATISTICS AND RATIO REVISION

STUDENTS MUST KNOW:

The fundamental aspects of geometry and statistics including

- Trigonometry.
- Circle theorems.
- Similarity and congruence.
- Histograms and cumulative frequency graphs.
- Probability.

The fundamental aspects of ratio and proportion including

- Direct and inverse proportion.
- Application of ratio to other areas of mathematics.

HOW THIS WILL BE ASSESSED:

A GCSE exam paper will be completed each week and feedback provided and a whole school mock exam.

HALF TERM 5: TARGETED REVISION

STUDENTS MUST KNOW:

How to apply their knowledge of the content learnt to exam style questions.

HOW THIS WILL BE ASSESSED:

External examinations in May and June.

HALF TERM 6: TARGETED REVISION

STUDENTS MUST KNOW:

How to apply their knowledge of the content learnt to exam style questions.

HOW THIS WILL BE ASSESSED:

External examinations in May and June.

Embedding this knowledge can be supported at home by using Dr Frost Maths website to consolidate learning that has taken place in class, attempting questions which can be found online at www.corbettmaths.com, practising exam papers from the AQA website and www.mathsgenie.co.uk and using revision guides and the CGP workbook provided.