Bishop Milner
CATHOLIC COLLEGE

Year 7 LONG-TERM SEQUENCE for MATHS

The curriculum for this stage of students' education has been designed to:
Ensure that students build fluency in core mathematical concepts while also developing skills needed across the wider curriculum, particularly in science. Each term builds on the previous one, with concepts introduced when they are most meaningful and impactful.
Key features of the design include:
- Building a strong foundation in algebraic thinking early in Year 7.
- Developing fluency with core number skills such as place value, rounding, and the four operations.
- Using a carefully sequenced structure so that new learning builds on prerequisite knowledge.
- Revisiting important skills in different contexts to improve retention and retrieval.
- Encouraging abstract reasoning, pattern spotting, problem-solving, and mathematical thinking that support future learning.

Half Term 1	Half Term 2	Half Term 3
Students Must know: **Sequences** Students build on their primary-school experience of recognising number patterns and counting in steps by identifying rules, generating sequences, and describing patterns using mathematical language. **Algebraic Notation and Substitution** Students extend their understanding of missing-number problems and function machines by using letters to represent numbers, interpreting algebraic notation, and substituting values into expressions. **Expressions and Equations** Students build on their understanding of equality and inverse operations from primary school by forming, simplifying, and solving algebraic expressions and equations while exploring equivalence.	**Students Must know:** **Place Value, Ordering and Rounding** Students build on their primary-school understanding of place value, comparing numbers, and rounding by working with integers, including negative numbers, and using place value to estimate and calculate efficiently. **The Four Operations** Students extend the calculation skills developed in primary school by applying mental and written methods accurately with all four operations and using these skills to solve increasingly complex problems. **Averages and Range** Students build on their experience of handling and interpreting data in primary school by calculating and comparing the mean, median, mode, and range to describe data sets. **Rounding and Estimation** Students develop their primary-school rounding skills and apply knowledge from earlier Year 7 number topics to estimate calculations and check the reasonableness of answers.	**Students Must know:** **Graphing Data** Students build on their primary-school experience of collecting, representing and interpreting data by drawing and analysing graphs using appropriate scales and conventions. They also apply statistical skills developed in the Year 7 Averages and Range topic. **Fractions** Students extend their primary-school understanding of fractions by comparing, calculating and solving problems with fractions, building on number skills developed earlier in Year 7. **Decimals and Percentages** Students build on their primary-school knowledge of decimals, percentages and equivalence by converting between forms, comparing values and solving problems using efficient calculation strategies developed in earlier Year 7 number topics.
How this will be assessed: Weekly exit tickets. One end of half term assessment	How this will be assessed: Weekly exit tickets. One end of half term assessment	How this will be assessed: Weekly exit tickets. One end of half term assessment
Half Term 4	**Half Term 5**	**Half Term 6**
Students Must know: **Directed Number** Students build on their primary-school understanding of negative numbers and earlier Year 7 work on integers by comparing, ordering and calculating with positive and negative numbers. **Fractions and Percentages of Amounts** Students extend their primary-school knowledge of fractions and percentages by finding fractions and percentages of quantities and solving problems in context, using calculation skills developed earlier in Year 7. **Perimeter and Area** Students build on their primary-school understanding of measurement by calculating the perimeter and area of a range of shapes, applying number and calculation skills developed throughout earlier Year 7 topics.	**Students Must know:** **Speed, Distance and Time** Students build on their primary-school understanding of measuring length and working with simple rates by using and rearranging the speed formula to solve problems involving speed, distance and time. They also apply calculation skills developed earlier in Year 7 to interpret and solve real-world contexts involving rates of change. **Angles and Polygons** Students extend their primary-school knowledge of measuring and identifying angles by calculating missing angles, working with angle facts, and exploring properties of polygons. They build on earlier Year 7 work with reasoning and calculation to solve geometric problems involving shapes and their properties.	**Students Must know:** **Properties of Number** Students build on their primary-school understanding of factors, multiples and number facts by working with primes, prime factorisation and identifying properties such as divisibility. They extend earlier Year 7 number work by using these properties to support problem solving and reasoning about numbers. **Add and Subtract Fractions** Students extend their primary-school knowledge of equivalent fractions and basic fraction calculations by adding and subtracting fractions with the same and different denominators. They apply earlier Year 7 skills with number, equivalence and calculation to simplify answers and solve problems.
How this will be assessed: Weekly exit tickets. One end of half term assessment	How this will be assessed: Weekly exit tickets.	How this will be assessed: Weekly exit tickets. One end of year 7 assessment

Embedding this knowledge can be supported at home by:
Embedding this knowledge at home can be supported by regular practice and review of key skills in short, focused sessions. Parents are encouraged to use the White Rose Maths Practice Journals, which reinforce classroom learning through carefully sequenced questions, alongside the weekly completion of Sparx Maths homework, which helps students consolidate and deepen their understanding through independent practice and retrieval.