

Curriculum Plan

Department/subject: Mathematics - Year 7 Autumn Term

Our Vision: **We take opportunities and aspire to excellence**

Our Intent:

- All students will experience a curriculum richness, breadth and depth
- The curriculum equips every student with the knowledge and skills for the future in our local area and beyond
- The curriculum builds on prior knowledge and creates a ‘web of knowledge’
- Gaps in knowledge and skills are identified and addressed quickly

Year	Autumn 1	Autumn 2
Knowledge to be taught	<ul style="list-style-type: none"> • Describing and Continue a sequence in diagram and number forms, linear and non linear forms • Use single and graphical forms • Use and interpret algebraic notation • Use and understand inverse functions • Form and substitute into expressions • Represent functions graphically • Understand equality • Use fact families • Form and solve 1 step equations • Use equivalence in terms of algebraic expressions • Collect Like Terms • Additional Higher Content: Solving Equations involving Fractions, exploring sequences with fractions 	<ul style="list-style-type: none"> • Recognise and use place value up to one billion including decimals • Compare and use intervals • Compare and order numbers • Find the range and median from a set of numbers • Round numbers to powers of ten • Round numbers to one significant figure • Additional Higher Content: Explore and Use Standard Form, explore fractions greater than one
Key Words	Sequence, Term to term, linear, non linear, algebra, variable, equal, equation, inverse operation, like terms, functions, graphs, x-axis, y-axis	Place Value, ascending, descending, range, median, round, fraction, numerator, denominator, tenth, hundredth, a million, a billion
Links to prior knowledge	<p>At the start of the year, we do a baseline assessment to check students starting point, so we can build on this knowledge.</p> <p>Students may have come across some of this terms content in the primary curriculum. This term we will develop and build on these skills</p>	<p>Students may have come across some of this term’s content in the primary curriculum. This term we will develop and build on these skills</p> <p>Key number skills are essential foundation skills to our mathematics curriculum and pupils must be confident with their multiplication and division facts up to 12x12.</p>

	<p>This introductory unit is designed to be accessed by all students. All material in this unit is revisited and extended in forthcoming events</p>	
<p>How knowledge is assessed</p>	<p>Knowledge is assessed through both a formative and a summative approach. Teachers will use some of the following:</p> <ul style="list-style-type: none"> ● Baseline assessments – These are completed at the end of each half term on the topics that are to be taught the following term to assess students prior knowledge. ● Retrieval Starter questions – Students are expected to complete their retrieval starter questions through Dr Frost Maths at the beginning of every lesson (those without ipad do them into their books) ● Retrieval Quizzes - Retrieval quizzes recap on knowledge and content taught in the previous term in order to ascertain if knowledge has been retained. Generally the quizzes are self marked as the teacher goes through the answers. They will receive a Medal and Mission statement where they will be given the opportunity to have a go at similar questions to the one they got wrong. ● Sparx Maths Homework - Students will be set 1hour of homework a week through Sparx Maths. This will consist of tasks linked to current content, consolidations tasks and where appropriate times tables challenges. ● Teachers use in class strategies and approaches which may include, no hands up questioning throughout the lessons, show me mini white boards, True or false activities, exit tickets, student’s discussion and presentations, card sort activities, reasoning and problem solving tasks 	<p>Knowledge is assessed through both a formative and a summative approach. Teachers will use some of the following:</p> <ul style="list-style-type: none"> ● Quizzes ● Retrieval Starter questions ● Teacher questioning throughout the lessons ● Mini white boards ● True or false activities ● Student’s discussion and presentations ● Hegarty Maths ● Dr Frost Maths ● Sparx Maths for Home learning ● In Addition to the regular retrieval quizzes, at the end of every half term there will be a class test. Teachers will mark the student’s assessments and provide them with a question level analysis (QLA) sheet. This will identify Red, Amber and Green topics and students will be given time to work on their individual areas for development and will be expected to continue this at home

<p>How gaps will be addressed</p>	<ul style="list-style-type: none"> • Therapy lessons will take place after each end of term assessment, this could be whole class therapy and/or individual therapy which will allow students to address their individual areas for development and for teachers to pick up on any common mistakes/misconception using their QLA – Red/Amber/Green Sheets. • Students are encouraged to take responsibility for their own learning, students will be expected to catch up on any work from missed lessons, where appropriate resources are uploaded to google classrooms the morning of the lesson. If a student is finding a topic challenging, we encourage them to carry out some independent work on one of our online learning platforms and/or to speak to their teacher at the earliest opportunity. • We run a homework club that students are encouraged to attend to get support with their home learning or any of the concept in lessons they may be finding difficult. 	<ul style="list-style-type: none"> • Therapy lessons will take place after each end of half term assessment, this could be whole class therapy and/or individual therapy which will allow students to address their individual areas for development and for teachers to pick up on any common mistakes/misconception using their QLA – Red/Amber/Green Sheets. • Students are encouraged to take responsibility for their own learning, students will be expected to catch up on any work from missed lessons, where appropriate resources are uploaded to google classrooms the morning of the lesson. If a student is finding a topic challenging, we encourage them to carry out some independent work on one of our online learning platforms and/or to speak to their teacher at the earliest opportunity. • We run a homework club that students are encouraged to attend to get support with their home learning or any of the concept in lessons they may be finding difficult.
	<ul style="list-style-type: none"> • Problem solving will be embedded into lessons where students will learn to UNPACK problems pulling together different mathematical skills. • Links to ‘real life’ maths will be made to give concept to mathematical skills. • We will have overarching ‘Big questions’ to each lesson thinking about the bigger picture of the lesson. • Some students will be entered for the UKMT maths challenge and the HFL challenges throughout the year. 	<ul style="list-style-type: none"> • Problem solving will be embedded into lessons where students will learn to UNPACK problems pulling together different mathematical skills. • Links to ‘real life’ maths will be made to give concept to mathematical skills. • We will have overarching ‘Big questions’ to each lesson thinking about the bigger picture of the lesson. • Some students will be entered for the UKMT maths challenge and the HFL challenges throughout the year.



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