



## Curriculum intent

Our aim is to create positive, ambitious and resilient mathematical thinkers. To model and foster collaborative attitudes and instil a love of learning for all. We strive to deliver excellence to all, where everyone can succeed through hard work.

## Mathematical mindset for Y8:

"Bottomless wonders spring from simple rules, which are repeated without end" – Benoit Mandelbrot

## "What am I studying this year?"

Content will continue to be reinforced from Y7 and extended upon further, exploring more connections between topics and more practice with problem solving to deepen understanding. Algebra and Geometry will now be explored in greater depth this year with knowledge strengthened ready for Y9. See the table below for an overview of the topics studied in Y8.

|        | Week |  | 8 Core                                                                                             | 8 Support                                                                                                        |
|--------|------|--|----------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|
| Autumn | 1    |  | <b>Fractions</b><br>(Conversions, 4 Operations)                                                    | <b>Fractions</b><br>(Improper, Equivalent, Converting to Decimals, Add & Subtract)                               |
|        | 2    |  |                                                                                                    |                                                                                                                  |
|        | 3    |  |                                                                                                    |                                                                                                                  |
|        | 4    |  |                                                                                                    |                                                                                                                  |
|        | 5    |  | <b>Expressions</b><br>(Negatives, Simplifying, Expanding Brackets, Factorising)                    | <b>Expressions</b><br>(Negative Numbers, Simplifying, Brackets, Factorising)                                     |
|        | 6    |  |                                                                                                    |                                                                                                                  |
|        | 7    |  |                                                                                                    |                                                                                                                  |
|        | 8    |  |                                                                                                    |                                                                                                                  |
|        | 9    |  | <b>FDP</b><br>(Conversions, % of an Amount & Change, 4 operations with FDP)                        | <b>FDP</b><br>(Conversions, % of an Amount & Change)                                                             |
|        | 10   |  |                                                                                                    |                                                                                                                  |
|        | 11   |  | <b>Angles</b><br>(Measuring, Points & Lines, Parallel Lines, Triangles, Quads)                     | <b>Angles</b><br>(Measuring, Points & lines, Triangles, Quads)                                                   |
|        | 12   |  |                                                                                                    |                                                                                                                  |
|        | 13   |  |                                                                                                    |                                                                                                                  |
|        | 14   |  |                                                                                                    |                                                                                                                  |
| Spring | 15   |  | <b>Non Calc Ratio &amp; Proportion</b><br>(Simplifying, Sharing, Direct and Inverse Word Problems) | <b>Non Calc Ratio &amp; Proportion</b><br>(Ratio Notation, Sharing, Direct and Inverse Proportion Word Problems) |
|        | 16   |  |                                                                                                    |                                                                                                                  |
|        | 17   |  | <b>Area and Volume</b><br>(Triangles, Quads, Circles, Nets, 3D Shapes, Volume Prisms, Cylinders)   | <b>Area &amp; Volume</b><br>(Triangles, Parallelograms, Circles, 2D, 3D Shapes, Volume)                          |
|        | 18   |  |                                                                                                    |                                                                                                                  |
|        | 19   |  |                                                                                                    |                                                                                                                  |
|        | 20   |  |                                                                                                    |                                                                                                                  |
|        | 21   |  |                                                                                                    |                                                                                                                  |
|        | 22   |  |                                                                                                    |                                                                                                                  |
|        | 23   |  |                                                                                                    |                                                                                                                  |
|        | 24   |  |                                                                                                    |                                                                                                                  |
|        | 25   |  |                                                                                                    |                                                                                                                  |



|        |    |                                                                                                   |                                                                                                    |
|--------|----|---------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| Summer | 26 | <b>Equations</b><br>(Multi Step, Double Sided)                                                    | <b>Equations</b><br>(One and two step equations)                                                   |
|        | 27 |                                                                                                   |                                                                                                    |
|        | 28 |                                                                                                   |                                                                                                    |
|        | 29 | <b>Number Theory &amp; Sequences</b><br>(Factors, Primes, Multiples, Types of Sequence, Nth Term) | <b>Number Theory &amp; Sequences</b><br>(Factors, Primes, Multiples, Term to Term Rules, Nth Term) |
|        | 30 |                                                                                                   |                                                                                                    |
|        | 31 |                                                                                                   |                                                                                                    |
|        | 32 | <b>Co-ordinates &amp; Graphs</b><br>(Functions, Co-ordinate Problems, Plotting Graphs)            | <b>Co-ordinates &amp; Graphs</b><br>(Function machines, co-ordinates, plotting graphs)             |
|        | 33 |                                                                                                   |                                                                                                    |
|        | 34 |                                                                                                   |                                                                                                    |
|        | 35 |                                                                                                   |                                                                                                    |
|        | 36 |                                                                                                   |                                                                                                    |
|        | 37 |                                                                                                   |                                                                                                    |
|        | 38 |                                                                                                   |                                                                                                    |
|        | 39 |                                                                                                   |                                                                                                    |

## Homework

Homework is set weekly every Wednesday on Dr Frost. Students have the opportunity to continually practice recall of current and prior knowledge to secure their understanding.

Students are also encouraged to use Dr Frost for independent study and for any revision for upcoming assessments.

## “How will I be assessed in Maths?”

Students are assessed in two ways:

- Informally with a variety of activities including mini-whiteboards, check-point questions, low-stakes quizzes and end of topic tests. Students will receive verbal feedback in every lesson in response to these checks. Teachers will guide students every lesson through their independent practice, hunt for and address misconceptions as they arise and review answers to all questions set.
- Formally with three assessments sat as “exams” once per term. Students will be given a revision list which includes a list of topics to revise along with search codes for Dr Frost.
  - o Assessment 1 (Autumn) will cover questions from the first 5 topics.
  - o Assessment 2 (Spring) will cover questions from the next 5 topics alongside a few questions from Autumn content.
  - o Assessment 3 (Summer) will cover questions from the next 6 topics alongside a few questions from Autumn and Spring content.



## **“What is coming up next?”**

Next year will continue to build upon all knowledge and skills learnt so far. This means that all knowledge learnt this year (and in Y7 and Y8) will be built upon in greater depth and complexity throughout Y9. All topics next year will include a quick recap of prior learning to practise retrieval and recall strategies. Students will continue to refine their understanding of core content and start to put reasoning and problem-solving techniques to practice regularly.

## **Students will demonstrate pride in their work by:**

- Presenting information clearly and neatly to aid learning
- Writing a date and title for all work
- Writing in blue or black pen
- Completing drawings and diagrams in pencil
- Glue in sheets flat and in order
- Annotate work and make corrections when asked to
- Cross out any mistakes neatly
- Highlight key words and explanations