

## MATHS Year 7 Curriculum End Points and Key Vocabulary

	Autumn Term 1	Autumn Term 2	Spring Term 1	Spring Term 2	Summer Term 1	Summer Term 2
Ethos Links	<p><b>Milton Keynes-</b> Considering what is like to run a business in Milton Keynes.</p> <p><b>Sustainability –</b> Consideration of what it is like to run a sustainable company</p>	<p><b>STEM-</b> Use of algebra in many different areas of business and applications of equations</p>	<p><b>STEM –</b> Use of area and scale factors within scale drawings</p> <p><b>Milton Keynes –</b> Scale drawings and plans of Milton Keynes</p>	<p><b>STEM, Sustainability and Milton Keynes –</b> Application to all 3 in calculations of average and spread</p>	<p><b>STEM –</b> Use of probability and how likely events are to happen</p> <p><b>Milton Keynes –</b> Use of probability and how likely events are to happen</p>	<p><b>STEM and Sustainability –</b> Both apply to charts and graphs in context</p>
Learning End Points	<p><b>Project ‘How to make a profit running a shop in centre MK’</b></p> <p><b>Percentages</b></p> <p>By the end of this unit students will know and understand:</p> <ul style="list-style-type: none"> <li>➤ Define percentage as ‘number of parts per hundred’.</li> <li>➤ Interpret percentages as operators.</li> <li>➤ Calculate percentage increase and decrease.</li> </ul>	<p><b>Directed Numbers</b></p> <p>By the end of this unit students will know and understand:</p> <ul style="list-style-type: none"> <li>➤ Order positive and negative integers</li> <li>➤ Add and subtract with both positive and negative integers</li> </ul> <p><b>Perimeter</b></p> <p>By the end of this unit students will know and understand:</p> <ul style="list-style-type: none"> <li>➤ How to calculate perimeter of 2D shapes using addition.</li> </ul>	<p><b>Properties of Number</b></p> <p>By the end of this unit students will know and understand:</p> <ul style="list-style-type: none"> <li>➤ prime numbers, factors, multiples and be able to identify them</li> <li>➤ How to calculate highest common factor and lowest common multiple of 2 numbers</li> <li>➤ Products of prime factors</li> <li>➤ How to use conventional notation for the</li> </ul>	<p><b>Averages</b></p> <p>By the end of this unit students will know and understand:</p> <ul style="list-style-type: none"> <li>➤ How to calculate appropriate measures of central tendency (mean, mode, median) and spread (range).</li> <li>➤ How to make comparisons between different averages.</li> </ul>	<p><b>Calculations with fractions</b></p> <p>By the end of this unit students will know and understand:</p> <ul style="list-style-type: none"> <li>➤ How to calculate fractions of amounts.</li> <li>➤ How to add, subtract, multiply and divide with fractions.</li> </ul> <p><b>Use of Ratio Notation</b></p> <p>By the end of this unit students will</p>	<p><b>Properties of shape</b></p> <p>By the end of this unit students will know and understand:</p> <ul style="list-style-type: none"> <li>➤ How to identify properties of 2d shapes.</li> <li>➤ How to identify named triangles and quadrilaterals.</li> </ul> <p><b>Angles</b></p> <p>By the end of this unit students will know and understand:</p> <ul style="list-style-type: none"> <li>➤ How to calculate missing angles</li> </ul>

	<ul style="list-style-type: none"> <li>➤ Calculate percentages of amounts using both calculator and non-calculator methods.</li> </ul> <p><b>Scale drawings and measures</b></p> <p>By the end of this unit students will know and understand:</p> <ul style="list-style-type: none"> <li>➤ Convert units of length by multiplying by 10, 100 and 1000 in context.</li> <li>➤ Calculate scale.</li> <li>➤ Apply scale to calculate missing lengths.</li> <li>➤ Draw a scale drawing.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Perpendicular height and when to use it.</li> </ul> <p><b>Place Value</b></p> <p>By the end of this unit students will know and understand:</p> <ul style="list-style-type: none"> <li>➤ Place value of both whole and decimal numbers.</li> <li>➤ How to use and apply place value for decimals, measures, and integers of any size.</li> </ul> <p><b>Introduction to algebraic notation</b></p> <p>By the end of this unit students will know and understand:</p> <ul style="list-style-type: none"> <li>➤ How to use and interpret algebraic notation.</li> <li>➤ Collecting like terms.</li> <li>➤ Substitution of positive values.</li> </ul>	<p>priority of operations (BIDMAS).</p> <ul style="list-style-type: none"> <li>➤ Square numbers and identify them up to 15 squared.</li> <li>➤ Cube numbers and identify them up to 5 cubed.</li> </ul> <p><b>Calculations using 4 operations</b></p> <p>By the end of this unit students will know and understand:</p> <ul style="list-style-type: none"> <li>➤ How to use four operations, including formal written methods for calculations.</li> <li>➤ The relationships between inverse operations.</li> </ul> <p><b>Measures and Scale factors</b></p> <p>By the end of this unit students will know and understand:</p>	<p><b>Sequences</b></p> <p>By the end of this unit students will know and understand:</p> <ul style="list-style-type: none"> <li>➤ How to generate terms of a sequence.</li> <li>➤ How to find term-to-term and position-to-term rule.</li> </ul> <p><b>Coordinates and graphs</b></p> <p>By the end of this unit students will know and understand:</p> <ul style="list-style-type: none"> <li>➤ How to plot coordinates in all four quadrants.</li> <li>➤ horizontal and vertical lines and how to recognise them.</li> </ul> <p><b>Fractions, decimals and percentages</b></p> <p>By the end of this unit students will</p>	<p>know and understand:</p> <ul style="list-style-type: none"> <li>➤ Ratio notation.</li> <li>➤ How to simplify a ratio.</li> <li>➤ Dividing a given quantity into two parts in a given ratio.</li> </ul> <p><b>Introduction to probability</b></p> <p>By the end of this unit students will know and understand:</p> <ul style="list-style-type: none"> <li>➤ The probability scale.</li> <li>➤ The language of probability.</li> <li>➤ How to carry out and make conclusions from a probability experiment.</li> <li>➤ That the probabilities of all possible outcomes sum to 1.</li> </ul>	<p>using the properties of angles at a point, angles at a point on a straight line, vertically opposite angles.</p> <ul style="list-style-type: none"> <li>➤ How to calculate and apply the sum of angles in a triangle.</li> <li>➤ How to calculate and apply the sum of angles in a quadrilateral.</li> </ul> <p><b>Charts and Graphs</b></p> <p>By the end of this unit students will know and understand:</p> <ul style="list-style-type: none"> <li>• How to construct and interpret appropriate tables, charts and diagrams, including frequency tables, bar charts and pictograms</li> </ul>
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- How to change freely between related standards units (time, length).
- How to tell the time in 12-hour and 24-hour clock.
- How to read and use timetables.
- Convert between metric measures by multiplying and dividing by 10, 100 and 1000.

**Area**

By the end of this unit students will know and understand:

- How to calculate the area of triangles, parallelograms and trapeziums.
- How to calculate and solve problems involving composite shapes/
- How to solve area problems.

know and understand:

- How to convert between fractions, decimals and percentages.

<b>Key Vocabulary</b>	Percent Increase Decrease Multiplier Profit Loss Unit Metre	Positive Negative Unit Decimal Tenths Hundredths Thousandths Perimeter Variable Expression Like Expand Inverse Unknown	Prime number Factor Multiple Square number Cube number Area	Mean Mode Median Range Spread Average Term Quadrant Axis	Numerator Denominator Mixed number Improper fraction Likely Unlikely Certain Impossible Share	Frequency Axis Parallel Acute Obtuse Reflex Right-angle