

# KS3 Curriculum overview: Subject Maths Year 7, 8 & 9

All students in Belmont Park study a variety of maths topics

|          | Year 7  | Year 8   | Year 9  |
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| Autumn 1 | <p>Whole Numbers and Decimals:</p> <ul style="list-style-type: none"> <li>- Data collection</li> <li>- Interpreting and representing data</li> <li>- Range and averages</li> <li>- Fraction, decimal and percentages</li> </ul> <p>Students to be able to read data and give opinions on results as well as be able to convert between fractions decimals and percentages.</p> <p style="color: red;">To revise via doddle e-learning tasks</p> <p style="color: green;">SMSC- To create a questionnaire and draw out the table explaining outcomes. To present findings to the class. (Respecting classmates allowing others to present)</p> | <p>Whole Numbers and Decimals:</p> <ul style="list-style-type: none"> <li>- Range and averages</li> <li>- Fraction, decimal and percentages</li> <li>- Estimation and rounding</li> <li>- Probability 1</li> <li>- Problem solving</li> </ul> <p>Students to convert between fractions decimals and percentages. To solve questions in regards to probability with dice, cards and two way tables.</p> <p style="color: red;">To revise via doddle e-learning tasks</p> <p style="color: green;">SMSC- To create a two way table and work out the probability and explain to their peers how they derived to their final answer.</p> | <p>Whole Numbers and Decimals:</p> <ul style="list-style-type: none"> <li>- Fraction, decimal and percentages</li> <li>- Probability 1</li> <li>- Probability 2</li> <li>- Problem solving</li> <li>- Ratio and proportion</li> </ul> <p>Students to convert between fractions decimals and percentages. To be able to solve word problems with ratio and proportion.</p> <p style="color: red;">To revise via doddle e-learning tasks / GCSE Bitesize</p> <p style="color: green;">SMSC- To divide a quantity in a given ratio and explain how it can be used in a real life situation. (Baker, builder and hairdresser...etc)</p> |
| Autumn 2 | <p>Measures, Perimeter and Area:</p> <ul style="list-style-type: none"> <li>- Measurement 1</li> <li>- Angles</li> <li>- Triangles and constructions</li> <li>- Perimeter, area and volume</li> </ul>   | <p>Measures, Perimeter and Area:</p> <ul style="list-style-type: none"> <li>- Measurement 2</li> <li>- Perimeter, area and volume</li> <li>- Problem-solving: Geometry</li> <li>- Functional maths</li> <li>- 3-D shapes</li> </ul>  | <p>Measures, Perimeter and Area:</p> <ul style="list-style-type: none"> <li>- Measurement 2</li> <li>- Perimeter, area and volume</li> <li>- Circle and cylinders</li> <li>- 3-D shapes</li> <li>- Quadrilaterals and other Polygons</li> </ul>   |

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|          | <p>Students to be able to convert between different measurements and to be able to calculate the area and perimeter.</p> <p>To revise via doddle e-learning</p> <p>SMSC- To create a plan of a famous building and calculate the perimeter and area.</p>  | <p>Students to be able to work out perimeter and area and to solve problems with 3-D shapes. To solve functional maths problems with shapes.</p> <p>To revise via doddle e-learning tasks</p> <p>SMSC- To create a plan of a famous building and calculate the perimeter and area.</p>  | <p>Students to be able to work out perimeter and area to solve problems with 3-D shapes. To work out the area of a circle following formulas.</p> <p>To revise via doddle e-learning tasks / GCSE Bitesize</p> <p>SMSC- To create a plan of a famous building and calculate the perimeter and area. A circle must also be included.</p>  |
|          | Year 7  | Year 8  | Year 9   |
| Spring 1 | <p>Number and Algebra:</p> <ul style="list-style-type: none"> <li>- Number skills 1</li> <li>- Multiples, factors, powers and roots</li> <li>- Basic rules of algebra</li> <li>- Fractions</li> </ul> <p>Students to be able to solve basic algebra vis collecting like terms. To be able to add/subtract/multiply and divide fractions.</p> <p>To revise via doddle e-learning</p> | <p>Number and Algebra:</p> <ul style="list-style-type: none"> <li>- Number skills 2</li> <li>- Fractions , percentages and decimals</li> <li>- Algebra 1</li> <li>- Functional maths- Algebra</li> <li>- Sequences and proof</li> </ul> <p>Students to be able to solve algebra vis expanding of brackets and to rearrange making another value the subject.</p> <p>To revise via doddle e-learning tasks</p> | <p>Number and Algebra:</p> <ul style="list-style-type: none"> <li>- Algebra 1</li> <li>- Functional maths- Algebra</li> <li>- Coordinates and linear graphs</li> <li>- Problem solving</li> <li>- Equations and inequalities</li> </ul> <p>Students to solve algebraic equations and to be able to plot an algebraic expression on a graph.</p> <p>To revise via doddle e-learning tasks / GCSE Bitesize</p> |

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|          | SMSC- SMSC- How can shop managers use sales figures for previous months to predict future sales?   | SMSC- How can shop managers use sales figures for previous months to predict future sales? Must include a conclusion explaining results.  | SMSC- How can shop managers use sales figures for previous months to predict future sales? Must include a graph for results.  |
| Spring 2 | <p>Geometry and Measure –Angles</p> <ul style="list-style-type: none"> <li>- Angle properties of a triangle</li> <li>- Angle properties of a quadrilateral</li> <li>- Polygons 1</li> <li>- Equation of a straight line</li> </ul> <p>Students to be able to solve interior and exterior angles of a shape.</p> <p>To revise via doddle e-learning</p> <p>SMSC- To find and describe places on a map you need to understand the grid system.</p> | <p>Geometry and Measures- Angles</p> <ul style="list-style-type: none"> <li>- Polygons 1</li> <li>- Properties of a shape</li> <li>- Equation of a straight line</li> <li>- Gradient of a straight line</li> </ul> <p>Students to be able to solve interior and exterior angles of a shape including shapes with unknown variables.</p> <p>To revise via doddle e-learning tasks</p> <p>SMSC- To use a straight line graph to help analyse real life situations such as mobile phone tariffs.</p> | <p>Geometry and Measures- Angles</p> <ul style="list-style-type: none"> <li>- Polygons 2</li> <li>- Equation of a straight line</li> <li>- Gradient of a straight line</li> <li>- Intercept of a straight line graph</li> <li>- The equation <math>y=mx+c</math></li> </ul> <p>Students to be able to solve interior and exterior angles of a shape including shapes with unknown variables. To be able to plot on the graph where Y intercepts.</p> <p>To revise via doddle e-learning tasks / GCSE Bitesize</p> <p>SMSC- To use a straight line graph to help analyse real life situations such a relation between two variables (currency)</p> |
|          | Year 7   | Year 8  | Year 9  |
| Summer 1 | <p>Statistics- Probability</p> <ul style="list-style-type: none"> <li>- Data collection</li> <li>- Bar charts/ pie charts</li> <li>- Calculating averages</li> </ul>   | <p>Statistics- Probability</p> <ul style="list-style-type: none"> <li>- Calculating averages</li> <li>- Scatter graphs and correlation</li> <li>- Stem and leaf diagrams</li> </ul>   | <p>Statistics- Probability</p> <ul style="list-style-type: none"> <li>- Averages of grouped data</li> <li>- Transformation</li> <li>- Maps and scale drawings</li> </ul>  |

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|          | <ul style="list-style-type: none"> <li>- Averages from grouped data</li> </ul> <p>Students to be able to use a protractor to draw a pie chart and to be able to calculate various averages including mean mode and median.</p> <p>To revise via doddle e-learning</p> <p>SMSC- To design and draw a bar graph/ pie chart having surveyed the class/ school on a topic of choice.</p>                          | <ul style="list-style-type: none"> <li>- Communicating the results of an enquiry</li> <li>- Transformations</li> </ul> <p>Students to be able to calculate averages and be able to read a variety of graphs including stem and leaf diagram.</p> <p>To revise via doddle e-learning tasks</p> <p>SMSC- To design and draw a bar graph/ pie chart having surveyed the class/ school on a topic of choice.</p> | <ul style="list-style-type: none"> <li>- Bearings</li> <li>- Venn diagram</li> <li>-</li> </ul> <p>Students to be able to calculate averages. To draw a basic map to scale and follow instructions to draw a plan for a garden.</p> <p>To revise via doddle e-learning tasks / GCSE Bitesize</p> <p>SMSC- To give instruction using bearing on a map from one location to another and explain it to a teacher/ classmate.</p> |
| Summer 2 | <p>Ratio and proportion</p> <ul style="list-style-type: none"> <li>- Direct proportion</li> <li>- Comparing proportions</li> <li>- Ratios</li> <li>- Best buys</li> </ul> <p>Students to be able use the unitary method to solve simple ratio.</p> <p>SMSC- To use a scenario in real life where using the unitary method will apply for example working out the cost of a single unit if bought in bulk.</p> | <p>Ratio and proportion</p> <ul style="list-style-type: none"> <li>- Ratios</li> <li>- Best buys</li> <li>- Proportion problems</li> <li>- Review exercise</li> </ul> <p>To be able to pick out the problem in word based questions</p>  | <p>Ratio and proportion</p> <ul style="list-style-type: none"> <li>- Number skills: ratios</li> <li>- Dividing quantities in a given ratio</li> <li>- Proportion problems</li> <li>- Review exercises- exam questions with ratio (functional skills paper)</li> </ul>   |