

Stone Hill School –Maths - Long Term Planner – 2017/18

In Key Stage 4, pupils will work towards achieving national qualifications in Mathematics. They will complete assessments in both Year 10 and Year 11 to ensure that they have the opportunity to reach the highest possible qualification for their level of mathematical understanding. All pupils will also access Mathematical Functional Skills lessons where they will apply their learning in practical contexts.

| Year 10 and Year 11 | | |
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| Entry Levels 1-3 | GCSE (Foundation level) | Mathematical Functional Skills enrichment. |
| <p>Many key objectives for the Entry Level are listed below. These objectives will form the basis of the KS4 maths curriculum although they will be differentiated to meet the needs of each pupil.</p> <p><u>Whole Numbers and calculations:</u></p> <ul style="list-style-type: none"> • Write, order and compare whole numbers up to 1000. • Know the value of each digit in a 3-digit number. • Add whole numbers up to 1000. • Subtract whole numbers from an initial value no greater than 1000. <p><u>Fractions, Percentages and Decimals</u></p> <ul style="list-style-type: none"> • Add and subtract decimals in context, i.e. money, measurement. • Calculate thirds, quarters, fifths and tenths of quantities where the answer is an integer. • Use fractions in context. • Recognise equivalent fraction, decimal and percentage notation. • Find 1%, 25%, 50% for three digit numbers, limited to | <p>Only a small number of pupils will be entered for GCSE Foundation level (which will allow pupils to reach up to a grade 5). These pupils will be given some additional small group maths sessions and will be expected to complete a weekly home learning activity.</p> <p>For a detailed overview of objectives and the OCR examination process, please follow the link below. Curriculum objectives begin from page 8.</p> <p>http://www.ocr.org.uk/Images/168982-specification-</p> | <p>Pupils will work towards mastering the following skills through a range of real life scenarios and practical problems.</p> <p><u>Money</u></p> <ul style="list-style-type: none"> • Select coins and notes to make a given total. • Give change. • Manage a small budget. <p><u>Time</u></p> <ul style="list-style-type: none"> • Read analogue and digital clocks • Use timetables to plan journeys • Measure and record intervals of time |

results which are whole number answers. Find other percentage quantities by combining results.

Multiples

- Know and use multiplication of whole numbers up to 12×12 , and use this knowledge in multiplication and division problems.
- Understand the index notation for squared and cubed and be able to calculate the results of squared and cubed powers on the numbers, 1–5 and 10.

Estimation and Approximation

- Understand and use place value to order 2 significant figure integer numbers up to 1000, e.g. 580, 120, 91.
- Round numbers to the nearest whole multiple of ten.
- Use approximate values to obtain an estimation.

Proportionality

- Solve simple proportion problems using systematic analysis, e.g. adapt a 2 person recipe for 1 person, 3 people, 20 people etc.

Scales and Graphs

- Construct and interpret graphs in real-world contexts, e.g. distance-time, money conversion, cost-time.

Shapes and Solids

- Identify pictures of three dimensional objects. Identify and sketch nets of cuboids.

Units and Measures

- Use given measurements to calculate perimeter in mm, cm or m as appropriate
- Calculate area of rectangles and triangles drawn to scale on square grids.

[gcse-mathematics-j560.pdf](#)

- Use a calendar effectively to solve problems.

Length, Mass and Capacity.

- Select and use appropriate measuring equipment.
- Convert between common units of measurement.
- Estimate and measure to solve a practical problem

Fractions and percentages

- Calculate fractions of money and measures.
- Recognise that $\frac{1}{2}$ is equivalent to 50% and a quarter is equivalent to 25%.

Shape and Space

- Read maps using simple grid systems.
- Recognise 2D and 3D shapes found in their environment.
- Create nets of common 3D shapes.

- Select coins and notes equivalent to an amount of money up to £20.
- Give change from £20. Solve problems involving multiplication or division of money by a whole number no greater than 10.
- Read and write time for digital and analogue clocks (in hours and in five minute intervals).

A more detailed overview of objectives can be found by following the link below.

<http://www.ocr.org.uk/Images/313156-specification-entry-level-mathematics-r449.pdf>

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