

MATHEMATICS CURRICULUM INFORMATION

YEAR 1

In Year 1 the girls learn to compare, order, read and write numbers from 0 to at least 20. They practise addition and subtraction of numbers within 20 and know pairs of numbers that total 10. They can visualise and name 2-D shapes and 3-D solids, describing their features. The pupils measure and compare lengths, weights and capacities using uniform non-standard and standard measures. They collect, organise, present and interpret information to answer questions. The girls add or subtract a 1-digit number or multiple of 10 to/from a 2 digit number. They solve problems involving counting, adding, subtracting, doubling or halving numbers, money, measures and time (to the hour and half hour). The pupils describe patterns and relationships involving numbers or shapes and test examples which fit conditions. They understand halves and quarters in context. Finally, the girls develop their knowledge of times tables through deriving and recalling multiplication facts for the 2, 5 and 10 times-tables and the related division facts.

YEAR 2

In Year 2 the girls learn to compare, order, read and write 2 digit and 3 digit numbers and use the $<$ and $>$ symbols. They solve problems and puzzles involving understanding of numbers and operations, explaining their methods and justifying decisions. The pupils can add and subtract 1 and 2 digit numbers. They solve problems involving numbers, money or measures, using addition, subtraction, multiplication or division. The girls describe and visualise the properties of common 2-D and 3-D shapes and can use line symmetry. They present data in block graphs and pictograms. They learn to measure and compare lengths, weights and capacities using standard units, reading scales and interpreting the divisions. The pupils can find half, quarter and three quarters of shapes and sets of objects and read time to the quarter hour. Finally, the girls develop their knowledge of times tables through deriving and recalling multiplication facts for the 2, 3, 4, 5 and 10 times-tables and the related division facts.

YEAR 3

In Year 3 the girls add and subtract using mental methods for 1 and 2 digit numbers and written methods for 2- and 3- digit numbers. They learn to multiply and divide TU by U. They develop written methods of calculation for all four operations. Pupils can interpret drawings of shapes and use reflective symmetry to draw and complete shapes. They can recognise, use and draw right angles. The girls can sort information using lists, tables and diagrams and present data in frequency tables and bar charts. They know the relationships between units of measure and can choose and use appropriate units of measurement. They learn to use inverses to estimate and check calculations. Pupils can find unit fractions of numbers and quantities. They derive and consolidate their knowledge of number facts for all four operations. By the end of Year 3 the girls are expected to know the answer instantly to any times table question.

YEAR 4

In Year 4 the girls order, partition and round 4 digit numbers and learn about positive and negative numbers. They practise written methods of calculation for all four

operations and can double 2 digit numbers. They investigate the properties of polygons, including line symmetry and recognise nets of common solids. Using standard metric units, the girls can estimate, measure and record measurements. They can read from scales and compare the impact of different scales. The pupils construct tables, diagrams, tally charts, pictograms and bar charts. They read time using 'am' and 'pm'. They also learn how to calculate the area and perimeters of rectangles. The girls measure angles in degrees and use compass points. They solve one- and two-step word problems involving numbers, money, measures of time. They learn to recognise the equivalence of fractions and interpret the language of ratio and proportion. Finally, the girls continue to develop their proficiency in times tables through weekly mental mathematics tests, including revision of all times and division tables to 12x12.

YEAR 5

In the Autumn Term the girls are prepared for the Entrance Examination into the Senior School. They enjoy the challenge of entering the Primary Maths Challenge competition. In Year 5 the girls practise written methods of calculation with whole numbers and decimals, and order, partition and round numbers and decimals to 2 places. They learn to use mental methods and recall for sums, differences, doubles and halves of decimals. The pupils identify factors and common multiples, develop the language of probability and learn to find the mode. They can explain reasoning using diagrams, graphs and text. Pupils read time using the 24-hour clock and timetables. They draw shapes with parallel and perpendicular lines and can estimate, measure and draw angles. They identify two lines of symmetry and use reflection and translation. The pupils can represent and solve one-step and two-step problems with whole numbers and decimals in all four operations. They recognise the equivalence of fractions, can calculate fractions and percentages of quantities, and can find proportions of quantities. Finally, girls consolidate their problem-solving skills through weekly reasoning and logic problems.