

BARNSTON PRIMARY SCHOOL MEDIUM TERM PLANNING SPRING



SUBJECT: Maths

YEAR GROUP: 4

YEAR IN CYCLE: Yearly

	NATIONAL CURRICULUM	ADDITIONAL SCHOOL CURRICULUM
Spring	<p>Number – number and place value</p> <p>find 1000 more or less than a given number</p> <ul style="list-style-type: none"> count backwards through zero to include negative numbers recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones) identify, represent and estimate numbers using different representations count in multiples of 6, 7, 9, 25 and 1000 round any number to the nearest 10, 100 or 1000 solve number and practical problems that involve all of the above and with increasingly large positive numbers read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero and place value. <p>Number – addition and subtraction</p> <p>Statutory requirements Pupils should be taught to:</p> <ul style="list-style-type: none"> add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate estimate and use inverse operations to check answers to a calculation solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why. <p>Number – multiplication and division</p> <p>Statutory requirements Pupils should be taught to:</p> <ul style="list-style-type: none"> recall multiplication and division facts for multiplication tables up to 12 × 12 use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers recognise and use factor pairs and commutativity in mental calculations solve problems involving multiplying and adding, including using the 	<p>Number – number and place value</p> <p>Notes and guidance (non-statutory) Using a variety of representations, including measures, pupils become fluent in the order and place value of numbers beyond 1000, including counting in tens and hundreds, and maintaining fluency in other multiples through varied and frequent practice. They begin to extend their knowledge of the number system to include the decimal numbers and fractions that they have met so far. They connect estimation and rounding numbers to the use of measuring instruments. Roman numerals should be put in their historical context so pupils understand that there have been different ways to write whole numbers and that the important concepts of zero and place value were introduced over a period of time.</p> <p>Number – addition and subtraction</p> <p>Notes and guidance (non-statutory) Pupils continue to practise both mental methods and columnar addition and subtraction with increasingly large numbers to aid fluency (see Mathematics Appendix 1).</p> <p>Number – multiplication and division</p> <p>Notes and guidance (non-statutory) Pupils continue to practise recalling and using multiplication tables and related division facts to aid fluency. Pupils practise mental methods and extend this to three-digit numbers to derive facts, (for example $600 \div 3 = 200$ can be derived from $2 \times 3 = 6$). Pupils practise to become fluent in the formal written method of short multiplication and short division with exact answers (see Mathematics Appendix 1). Pupils write statements about the equality of expressions (for example, use the distributive law $39 \times 7 = 30 \times 7 + 9 \times 7$ and associative law $(2 \times 3) \times 4 = 2 \times (3 \times 4)$). They combine their knowledge of number facts and rules of arithmetic to solve mental and written calculations for example, $2 \times 6 \times 5 = 10 \times 6 = 60$. Pupils solve two-step problems in contexts, choosing the appropriate operation, working</p>

distributive law to multiply two digit numbers by one digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects.

Number – fractions (including decimals)

Statutory requirements

Pupils should be taught to:

- recognise and show, using diagrams, families of common equivalent fractions
- count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten.
- add and subtract fractions with the same denominator
- recognise and write decimal equivalents of any number of tenths or hundredths
- recognise and write decimal equivalents to $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$
- find the effect of dividing a one- or two-digit number by 10 and 100, identifying the
- value of the digits in the answer as ones, tenths and hundredths
- round decimals with one decimal place to the nearest whole number
- compare numbers with the same number of decimal places up to two decimal places
- solve simple measure and money problems involving fractions and decimals to two decimal places.

Pupils should connect hundredths to tenths and place value and decimal measure. Pupils continue to practise adding and subtracting fractions with the same denominator, to become fluent through a variety of increasingly complex problems beyond one whole.

Measurement

Statutory requirements

Pupils should be taught to:

- Convert between different units of measure [for example, kilometre to metre; hour to minute]
- estimate, compare and calculate different measures, including money in pounds and pence
- read, write and convert time between analogue and digital 12- and 24-hour clocks
- solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days.
- measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres
- find the area of rectilinear shapes by counting squares
- estimate, compare and calculate different measures, including money in pounds and pence

with increasingly harder numbers. This should include correspondence questions such as the numbers of choices of a meal on a menu, or three cakes shared equally between 10 children.

Number – fractions (including decimals)

Notes and guidance (non-statutory)

Pupils should connect hundredths to tenths and place value and decimal measure.

They extend the use of the number line to connect fractions, numbers and measures.

Pupils understand the relation between non-unit fractions and multiplication and division of quantities, with particular emphasis on tenths and hundredths.

Pupils make connections between fractions of a length, of a shape and as a representation of one whole or set of quantities. Pupils use factors and multiples to recognise equivalent fractions and simplify where appropriate (for example, $\frac{6}{9} = \frac{2}{3}$ or $\frac{1}{4} = \frac{2}{8}$)

Pupils continue to practise adding and subtracting fractions with the same denominator, to become fluent through a variety of increasingly complex problems beyond one whole.

Pupils are taught throughout that decimals and fractions are different ways of expressing numbers and proportions.

Pupils' understanding of the number system and decimal place value is extended at this stage to tenths and then hundredths. This includes relating the decimal notation to division of whole number by 10 and later 100.

They practise counting using simple fractions and decimals, both forwards and backwards.

Measurement

Notes and guidance (non-statutory)

Perimeter can be expressed algebraically as $2(a+b)$ where a and b are the dimensions in the same unit.

They relate area to arrays and multiplication.

Geometry – properties of shapes

Statutory requirements

Pupils should be taught to:

- identify lines of symmetry in 2-D shapes presented in different orientations
- complete a simple symmetric figure with respect to a specific line of symmetry.

Geometry – position and direction

Statutory requirements

Pupils should be taught to:

- describe positions on a 2-D grid as coordinates in the first quadrant
- describe movements between positions as translations of a given unit to the left/right and up/down
- plot specified points and draw sides to complete a given polygon.

Statistics

Statutory requirements

Pupils should be taught to:

- interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs.
- solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs.

Geometry – properties of shapes

Statutory requirements

Pupils should be taught to:

Notes and guidance (non-statutory)

Pupils continue to classify shapes using geometrical properties, extending to classifying different triangles (for example, isosceles, equilateral, scalene) and quadrilaterals (for example, parallelogram, rhombus, trapezium).

Pupils draw symmetric patterns using a variety of media to become familiar with different orientations of lines of symmetry; and recognise line symmetry in a variety of diagrams, including where the line of symmetry does not dissect the original shape.

Statistics

Notes and guidance (non-statutory)

Pupils understand and use a greater range of scales in their representations. Pupils begin to relate the graphical representation of data to recording change over time.

ENTERPRISE**SOCIAL, SPIRITUAL, MORAL & CULTURAL****SCHOOL DRIVERS**

Delivered through cross-curricular links (Science, geography, creative curriculum).

Children to independently self-assess theirs and their partners work.

Children to develop the understanding of the importance of applying their skills across the curriculum.

Children to take responsibility for the presentation and the content of their work.

I can work with my partner.

I can share ideas with my group.

I can work as part of a team.

I can listen, concentrate and contribute in lessons

I can work responsibly with other people.

I can be honest and not copy from another person's work

I can respect the opinions of other people.

I can take turns speaking.

I can be conscientious listener.