Mathematics – Year 1

The NC AIMS are that all children should:

Number

- count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number
- count, read and write numbers to 100 numerals; count in multiples of twos, fives and tens
- given a number, identify one more and one less
- identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least
- read and write numbers from 1 to 20 in numerals and words

addition and subtraction

- read, write and interpret mathematical statements involving addition (+), subtraction (–) and equals (=) signs
- represent and use number bonds and related subtraction facts within 20
- add and subtract one-digit and two-digit numbers to 20, including zero
- solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = ☐ – 9

multiplication and division

- solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher.

fractions

- recognise, find and name a half as one of two equal parts of an object, shape or quantity
- recognise, find and name a quarter as one of four equal parts of an object, shape or quantity

measurement

- compare, describe and solve practical problems for:

lengths and heights (for example, long/short, longer/shorter, tall/short, double/half)
mass/weight (for example, heavy/light, heavier than, lighter than)
capacity and volume (for example, full/empty, more than, less than, half, half full, quarter)
time (for example, quicker, slower, earlier, later)

- measure and begin to record the following:

lengths and heights
mass/weight
capacity and volume
time (hours, minutes, seconds)

- recognise and know the value of different denominations of coins and notes
- sequence events in chronological order using language (for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon, evening)
- recognise and use language relating to dates, including days of the week, weeks, months and years
- tell the time to the hour and half past the hour and draw the hands on a clock face to show these times

Geometry – properties of shapes

- recognise and name common 2-D and 3-D shapes, including:

2-D shapes (for example, rectangles (including squares), circles and triangles)
3-D shapes (for example, cuboids (including cubes), pyramids and spheres)

Geometry – position and direction

- describe position, direction and movement, including whole, half, quarter and three-quarter turns.

The EASTCOURT ATTAINMENT TARGETS can be tabulated as follows:

Number	Measurement	Geometry	Statistics

Number

Number and place value

- count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number
- count, read and write numbers to 100 in numerals; count in multiples of twos, fives and tens
- given a number, identify one more and one less
- identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least
- read and write numbers from 1 to 20 in numerals and words.

Addition and subtraction

- read, write and interpret mathematical statements involving addition (+), subtraction (–) and equals (=) signs
- represent and use number bonds and related subtraction facts within 20

- add and subtract one-digit and two-digit numbers to 20, including zero
- solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as

7 = □ – 9.

Multiplication and division

- solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher

Fractions

- recognise, find and name a half as one of two equal parts of an object, shape or quantity
- recognise, find and name a quarter as one of four equal parts of an object, shape or quantity.

Measurement

- compare, describe and solve practical problems for:

lengths and heights (*e.g.* long/short, longer/shorter, tall/short, double/half)
mass or weight (*e.g.* heavy/light, heavier than, lighter than)
capacity/volume (full/empty, more than, less than, half, half full, quarter)
time (quicker, slower, earlier, later)

- measure and begin to record the following:

lengths and heights
mass/weight
capacity and volume
time (hours, minutes, seconds)

- recognise and know the value of different denominations of coins and notes
- sequence events in chronological order using language
- recognise and use language relating to dates, including days of the week, weeks, months and years
- tell the time to the hour and half past the hour and draw the hands on a clock face to show these times.

Geometry

Properties of shapes

- recognise and name common 2-D and 3-D shapes, including:

2-D shapes (e.g. rectangles (including squares), circles and triangles)
3-D shapes (e.g. cuboids (including cubes), pyramids and spheres).

Position and direction

- describe position, directions and movements, including half, quarter and three-quarter turns.

Statistics

- interpret and construct simple pictograms, tally charts, block diagrams and simple tables
- ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity
- ask and answer questions about totalling and comparing categorical data.

Mathematics – Year 2

The NC AIMS are that all children should:

Number and place value

- count in steps of 2, 3 and 5 from 0, and in tens from any number, forward and backward
- recognise the place value of each digit in a two-digit number (tens, ones)
- identify, represent and estimate numbers using different representations, including the number line
- compare and order numbers from 0 up to 100; use <, > and = signs
- read and write numbers to at least 100 in numerals and in words
- use place value and number facts to solve problems

Addition and subtraction

- solve problems with addition and subtraction:

using concrete objects and pictorial representations, including those involving numbers, quantities and measures
apply their increasing knowledge of mental and written methods

- recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 200
- add and subtract numbers using concrete objects, pictorial representations, and mentally, including:

a two-digit number and ones
a two-digit number and tens
two two-digit numbers
adding three one-digit numbers

- show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot
- recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems

Multiplication and division

- recall and use multiplication and division facts for the 2, 5 and 20 multiplication tables, including recognising odd and even numbers
- calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (x), division (÷) and equals (=) signs
- show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot
- solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts

Fractions

- recognise, find, name and write fractions $^1/_3$, $\frac{1}{4}$, $^2/_4$ and $\frac{3}{4}$ of a length, shape, set of objects or quantity
- write simple fractions for example, $\frac{1}{2}$ of 6 = 3 and recognise the equivalence of $^2/_4$ and $\frac{1}{2}$

Measurement

- choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels
- compare and order lengths, mass, volume/capacity and record the results using <, > and =
- recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value
- find different combinations of coins that equal the same amounts of money
- solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change
- compare and sequence intervals of time
- tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times
- know the number of minutes in an hour and the number of hours in a day

Geometry – Properties of shapes

- Identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line
- identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces
- identify 2-D shapes on the surface of 3-D shapes (for example, a circle on a cylinder and a triangle on a pyramid)
- compare and sort common 2-D and 3-D shapes and everyday objects

Geometry – position and direction

- order and arrange combinations of mathematical objects in patterns and sequences
- use mathematical vocabulary to describe position, direction and movement, including movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anti-clockwise)

Statistics

- interpret and construct simple pictograms, tally charts, block diagrams and simple tables
- ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity
- ask and answer questions about totalling and comparing categorical data
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The EASTCOURT ATTAINMENT TARGETS can be tabulated as follows:

Number	Measurement	Geometry	Statistics

Number

Number and place value

- count in steps of 2, 3, and 5 from 0, and in tens from any number, forward or backward
- recognise the place value of each digit in a two-digit number (tens, ones)
- identify, represent and estimate numbers using different representations, including the number line
- compare and order numbers from 0 up to 100; use <, > and = signs
- read and write numbers to at least 100 in numerals and in words
- use place value and number facts to solve problems, one step.

Addition and subtraction

- solve problems with addition and subtraction:

using concrete objects and pictorial representations, including those involving numbers, quantities and measures
applying their increasing knowledge of mental and written methods

- recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100
- add and subtract numbers using concrete objects, pictorial representations, and mentally, including:

a two-digit number and ones
a two-digit number and tens
two two-digit numbers
adding three one-digit numbers

- show that addition of two numbers can be done in any order (commutative) and subtraction of one number

from another cannot

- recognise and use the inverse relationship between addition and subtraction and use this to check calculations and missing number problems.

Multiplication and division

- recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers
- calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs
- show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot
- solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in context.

Fractions

Pupils should be taught to:

- recognise, find, name and write fractions $^1/_3$, $\frac{1}{4}$, $^2/_4$ and $\frac{3}{4}$ of a length, shape, set of objects or quantity
- write simple fractions e.g. $\frac{1}{2}$ of 6 = 3 and recognise the equivalence of $^2/_4$ and $\frac{1}{2}$.- only this, not more than this.

Measurement

- choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales.
- compare and order lengths, mass, volume/capacity and record the results using >, < and =
- recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value
- find different combinations of coins that equal the same amounts of money
- solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change
- compare and sequence intervals of time
- tell and write the time quarter past/to the hour and draw the hands on a clock face to show these times.

Geometry

- identify and describe the properties of 2-D shapes, including the number of sides and symmetry in a vertical line
  - identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces
- identify 2-D shapes on the surface of 3-D shapes, for example a circle on a cylinder and a triangle on a pyramid
- compare and sort common 2-D and 3-D shapes and everyday objects.

Position and direction

- order and arrange combinations of mathematical objects in patterns
- use mathematical vocabulary to describe position, direction and movement including distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anti-clockwise), and movement in a straight line.

Statistics

- interpret and present data using bar charts, pictograms and tables
- solve one-step questions such as 'How many more?' and 'How many fewer?' using information presented in scaled bar charts and pictograms and tables