MATHEMATICS
Programme of Study

Year 1 Number and Place Value

Here are the statutory requirements:

Number and place value

Pupils should be taught to:

- 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.

Below is a list of MathSphere modules covering the above requirements.

Number and place value
(265 pages including titles, concepts and answers where appropriate)

1. Count reliably a set of objects.   Count in steps of one.   (16 pages)

2. Read and write numbers in figures and words.
   Partition a number into tens and units.   (22 pages)

3. Counting over ten.   (22 pages)

4. Comparing and ordering numbers.   More than, less than.   (20 pages)

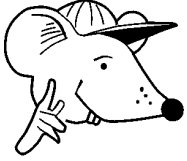5. Counting in twos.   (23 pages)

Number and place value (continued)
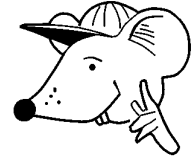
6. One or ten more than, or less than a given number.   (16 pages)

7. Counting in tens; odd and even numbers.   (14 pages)

8. Counting in fives.   (6 pages)

9. Count back in ones, twos and tens.   (15 pages)

10. Order a set of familiar numbers.   (16 pages)

11. Describe and extend number sequences.   (24 pages)

12. Estimation and approximation.   (13 pages)

Further resources:

13. Know the number names and recite them.   (17 pages)

14. Nursery rhymes with number and counting.   (22 pages)

15. Solve mathematical puzzles and investigate.   (19 pages)

Programme of Study

Year 1 Addition and Subtraction

Here are the statutory requirements:

Addition and subtraction

Pupils should be taught to:

- 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.

Below is a list of MathSphere modules covering the above requirements.

Addition and Subtraction
(181pages including titles, concepts and answers where appropriate)

1. Understand addition.   (12 pages)

2. Understand subtraction.   (11 pages)

3. Know addition and subtraction facts.   (24 pages)

4. Add or subtract 9.
   Use patterns of similar calculations.   (20 pages)

5. Add or subtract pairs of numbers mentally.   (23 pages)

6. Understand that more than two numbers can be added together.   (12 pages)

7. Use knowledge that addition can be done in any order.
   Identify near doubles.   (8 pages)

8. Adding or subtracting 10.   (14 pages)

Addition and Subtraction (continued)

9. Adding or subtracting crossing the tens.   (15 pages)

10. Add or subtract a multiple of 10.   (13 pages)

11. Choose and use appropriate number operations to solve problems.   (8 pages)

12. Investigate general statements.   (10 pages)

13. Solve simple word problems.   (11 pages)

Programme of Study

Year 1 Multiplication and Division

Here are the statutory requirements:

Multiplication and division

Pupils should be taught to:

- 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.

Below is a list of MathSphere modules covering the above requirements.

Multiplication and Division
(56 pages including titles, concepts and answers where appropriate)

1. Derive doubles and halves quickly.   (22 pages)

2. Combining groups of 2, 5 and 10.   (16 pages)

3. Using arrays.   (7 pages)

4. Understand division. Sharing into equal groups.   (11 pages)

Programme of Study

Year 1 Fractions

Here are the statutory requirements:

Fractions

Pupils should be taught to:

- 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.

Below is a list of MathSphere modules covering the above requirements.
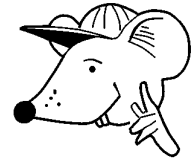
Fractions
(25 pages including titles, concepts and answers where appropriate)

1. Recognise simple fractions and equivalence.   (15 pages)

2. Recognise and find simple fractions. Count in halves.   (10 pages)

Programme of Study

Year 1 Measurement

Here are the statutory requirements:

Measurement

Pupils should be taught to:

- 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, 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 such as: before and after, next, first, today, yesterday, tomorrow, morning, afternoon and 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.

Below is a list of MathSphere modules covering the above requirements.

Measurement
(91 pages including titles, concepts and answers where appropriate)

  1. Measure and compare.   (9 pages)

  2. Suggest suitable units to estimate and measure.   (13 pages)

Measurement continued

3. Use simple measuring equipment .   (10 pages)

4. Understand and read the time.   (18 pages)

5. Word problems involving measurement.   (20 pages)

6. Problems involving money.   (21 pages)

Programme of Study

Year 1 Geometry

Here are the statutory requirements:

Geometry

Properties of shapes

Pupils should be taught to:

- 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

Pupils should be taught to:

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

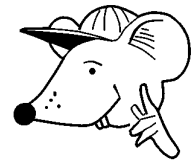Below is a list of MathSphere modules covering the above requirements.

Geometry
(40 pages including titles, concepts and answers where appropriate)

 1. Describe and classify 2D and 3D shapes.   (16 pages)

 2. Make models, shapes and patterns. Describe features.   (11 pages)

 3. Describe position and direction.   (7 pages)

 4. Describe movement in a straight line and turning.   (6 pages)

Non statutory mathematics

Year 1 Using and Applying Mathematics

Below is a list of MathSphere modules covering Using and Applying Mathematics:
(29 pages including titles, concepts and answers where appropriate)

1. Length, number and ordering word searches.   (8 pages)

2. Investigate 3 digits.   (5 pages)

2. Investigate totals up to 20.   (5 pages)

4. Caterpillar investigation.   (5 pages)

5. Penny sweets   (6 pages)

Non statutory mathematics

Year 1 Statistics

There are no statutory requirements for Year 1 Statistics.

Below is a list of MathSphere modules covering Statistics:
(23 pages including titles, concepts and answers where appropriate)

1. Collect, sort and organise information (1)   (12 pages)

2. Collect, sort and organise information (2)   (11 pages)