



MATHEMATICS

Programme of Study



Year 2 Number and Place Value

Here are the statutory requirements:

Number and place value

Pupils should be taught to:

- 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.

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

Number and place value

(166 pages including titles, concepts and answers where appropriate)

1. Revise counting on and back in steps of one. (18 pages)
2. Counting in tens and twos. Odd and even numbers. (16 pages)
3. Counting in steps of three and five. (9 pages)
4. Describe and extend number sequences. Count on and back. (19 pages)
5. Read and write 2-digit numbers. Partition numbers. (22 pages)
6. Comparing and ordering numbers. (19 pages)
7. One or ten more than or less than. Position numbers. (22 pages)

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Maths worksheets from mathsphere.co.uk

Number and place value (continued)

8. Order a set of familiar numbers. (15 pages)
9. Estimation and approximation. (15 pages)
10. Rounding a number to the nearest ten. (11 pages)



Programme of Study

Year 2 Addition and Subtraction

Here are the statutory requirements:

Addition and Subtraction

Pupils should be taught to:

- 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.

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

Addition and Subtraction

(207 pages including titles, concepts and answers where appropriate)

1. Understand addition. (13 pages)
2. Understand subtraction. (12 pages)
3. Know addition and subtraction facts. (22 pages)
4. Add in any order. Identify near doubles. (17 pages)

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Maths worksheets from mathsphere.co.uk

Addition and Subtraction (continued)

5. Adding more than two numbers. (16 pages)
6. Add and subtract pairs of numbers mentally. (27 pages)
7. Add or subtract multiples of ten. (25 pages)
8. Add or subtract: bridging through the tens. (17 pages)
9. Add or subtract by adjusting; use patterns. (28 pages)
10. Subtraction as the inverse of addition. (8 pages)
11. Checking answers. (9 pages)
12. Recording addition and subtraction in columns (13 pages)



Programme of Study



Year 2 Multiplication and Division

Here are the statutory requirements:

Multiplication and division

Pupils should be taught to:

- 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 (\times), division (\div) 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.

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

Multiplication and Division

(129 pages including titles, concepts and answers where appropriate)

1. Derive doubles and halves quickly. (12 pages)
2. Revise understanding multiplication. (17 pages)
3. 2 times table up to 12. (9 pages)
4. 5 times table up to 12. (9 pages)
5. 10 times table up to 12. (9 pages)
6. Tables: 2x, 5x and 10x speed sheets. (13 pages)

Multiplication and Division (continued)

- 7. Understand division. (25 pages)
- 8. Division tables (5 pages)
- 9. Multiply and divide mentally. (16 pages)
- 10. Understand remainders. (14 pages)



Programme of Study

Year 2 Fractions

Here are the statutory requirements:

Fractions

Pupils should be taught to:

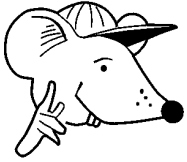
- recognise, find, name and write fractions $\frac{1}{3}$, $\frac{1}{4}$, $\frac{2}{4}$ and $\frac{3}{4}$ of a length, shape, set of objects or quantity
- write simple fractions e.g. $\frac{1}{2}$ of 6 = 3 and recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$.

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

Fractions

(32 pages including titles, concepts and answers where appropriate)

1. Recognise simple fractions and equivalence (14 pages)
2. Recognise thirds and halves. (7 pages)
3. Count in quarters. (6 pages)
4. Investigate halving. (5 Pages)



Programme of Study



Year 2 Measurement

Here are the statutory requirements:

Measurement

Pupils should be taught to:

- choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature ($^{\circ}\text{C}$); 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.

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

Measurement

(108 pages including titles, concepts and answers where appropriate)

1. Measure and compare. (15 pages)
2. Suggest suitable units to estimate and measure. (10 pages)
3. Use measuring equipment . Interpret scales. (14 pages)
4. Understand and read the time. (12 pages)
5. More understanding and reading the time. (16 pages)

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Maths worksheets from mathsphere.co.uk

Measurement continued

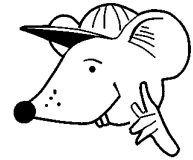
6. Word problems involving measurement. (13 pages)

7. Solve problems involving money. (23 pages)

8. Investigate 10p change. (5 pages)



Programme of Study



Year 2 Geometry

Here are the statutory requirements:

Geometry

Properties of shapes

Pupils should be taught to:

- 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

Pupils should be taught to:

- 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.

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

Geometry

(58 pages including titles, concepts and answers where appropriate)

1. Describe and classify 2D and 3D shapes. (10 pages)
2. Make shapes and patterns. Describe features. (11 pages)

Geometry continued

3. Describe movement in a straight line and angle as a measure of turn. (11 pages)
4. Describe position and direction. (11 pages)
5. Symmetry. (11 pages)
6. Investigate cubes. (4 pages)



Programme of Study

Year 2 Statistics

Here are the statutory requirements:

Statistics

Pupils should be taught to:

- 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.

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

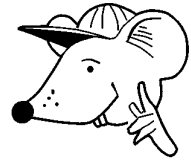
Statistics

(29 pages including titles, concepts and answers where appropriate)

1. Collect, sort and organise information. (9 pages)
2. Represent data. (13 pages)
3. Tally charts. (7 pages)



Non statutory mathematics



Year 2 Using and Applying Mathematics

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

1. Choose and use appropriate number operations to solve problems. (15 pages)
2. Investigate totals. (10 pages)
3. Investigate: 5 digit addition. (4 pages)
4. Investigate consecutive numbers. (4 pages)
5. Solve mathematical puzzles and investigate. (21 pages)
6. Investigate general statements. (12 pages)
7. Solve simple word problems. (14 pages)
8. Maths vocabulary word searches. (8 pages)
9. Necklace investigation. (5 pages)