



SYLLABUS

This syllabus is based on the key objectives, recommended in The National Literacy and Numeracy Strategies Revision Guidance for Year 6 Pupils, to assist in raising achievement to Level 4.

A. NUMBERS AND THE NUMBER SYSTEM

(a) Place value and ordering

1. Read and write numbers in figures and in words.
2. Multiply and divide whole numbers and decimals by 10 and 100 and explain the effect.
3. Order a set of positive and negative integers.

B. CALCULATIONS

(a) Rapid recall of addition and subtraction facts

1. Decimals that total 1 (e.g. $0.2 + 0.8$) or 10 (e.g. $6.2 + 3.8$).
2. 2 digit pairs that total 100 (e.g. $43 + 57$).
3. Add or subtract mentally any pair of two digit numbers.
4. Know that an addition fact can be reinterpreted as a subtraction fact and vice versa.

(b) Mental Strategies

1. Use known number facts and place value to consolidate mental addition and subtraction (e.g. $470 + 380$, $7.4 + 9.8$, $9.2 - 8.6$)
2. Calculate mentally differences such as $8006 - 2993$.

(c) Pencil and paper procedures for addition and subtraction

1. Extend written methods to column addition and subtraction of numbers involving decimals.

(d) Understanding multiplication and division

1. Understand and use division as the inverse of multiplication.
2. Express a quotient as a fraction or a decimal.

(e) Rapid recall of multiplication and division facts

1. Know by heart all the multiplication facts up to 10×10 .
2. Derive quickly corresponding division facts.
3. Derive quickly doubles of whole numbers 1 to 100, doubles of multiples of 10 e.g. 670×2 , doubles of 2-digit numbers e.g. 3.8×2 , 7.6×2 .
4. Square numbers including squares of multiples of 10 e.g. 60×60 .

(f) Mental calculation strategies

1. Use known facts, place value and a range of mental calculation strategies to multiply and divide mentally.

(g) Pencil and paper procedures for multiplication and division

1. Extend written methods to short multiplication HTU \times U and then numbers involving decimals.
2. Short division of HTU by U and then numbers involving decimals.

**C. FRACTIONS, DECIMALS AND PERCENTAGES****(a) Relating fractions to division**

1. Reduce a fraction to its simplest form.
2. Order a set of mixed numbers.
3. Use decimal notation for tenths and hundredths.
4. Relate fractions to their decimal representations.
5. Find simple percentages of small whole number quantities.

D. SOLVING PROBLEMS**(a) Problems involving 'real life', money and measures**

1. Use all four operations to solve word problems involving numbers and quantities based on real life, money and measures (including time)

E. HANDLING DATA**(a) Data handling**

1. Solve a problem by extracting and interpreting data in tables, graphs charts and diagrams.

F. MEASURES, SHAPE AND SPACE**(a) Measures**

1. Suggest suitable units and measuring equipment to estimate or measure length, mass or capacity.
2. Use, read and write standard metric units including their abbreviations and relationships between them. e.g. km, m, cm, mm, kg, g, l, ml.
3. Measure and draw lines to the nearest millimetre.
4. Use a protractor to measure and draw angles.

(b) Shape and space

1. Classify triangles and quadrilaterals using e.g. sides, angles and symmetry.
2. Recognise reflective symmetry; recognise where a shape will be after a reflection.
3. Recognise where a shape will be after a translation.
4. Read and plot co-ordinates.
5. Recognise perpendicular and parallel lines

LESSON OBJECTIVES

R - Recap C - Core E - Extension

LESSON A1 READING WRITING AND ORDERING NUMBERS

- R: Revision of place value .
C: **To read and write numbers with up to 7 digits**
To order numbers
E: To be able to use greater than and less than symbols

LESSON A2 MENTAL STRATEGIES AND THE FOUR RULES OF NUMBER

- R: Recall of addition and subtraction facts .
C: **To be able to use inverse operations to check answers**
E: To apply inverse to multiplication and division

LESSON A3 WRITTEN METHODS OF ADDITION AND SUBTRACTION

- R: Number bonds for addition and subtraction.
C: **To be able to use written methods of addition and subtraction confidently**

LESSON A4 MENTAL STRATEGIES FOR MULTIPLICATION AND DIVISION

- R: Multiplication facts up to 10×10 .
C: **To understand multiplication and division by 10, 100 and 1000**
To understand the terms factor and multiple
E: Deriving division facts from multiplication facts

LESSON A5 WRITTEN METHODS OF MULTIPLICATION

- R: Multiplication by 10, 100 and 1000 .
C: **To multiply a 2-digit number by 10, 20, 30, ...**
To multiply two 2-digit numbers together
E: Multiplication of a 2-digit number by a 3-digit number

LESSON A6 WRITTEN METHODS OF DIVISION

- R: Recap division facts .
C: **To divide a 3-digit number by a 1-digit number**
E: To find numbers which multiply to give a specified product

LESSON A7 EQUIVALENT FRACTIONS

- R: Identifying factors of numbers
C: **To understand equivalent fractions**
E: To simplify fractions

LESSON A8 FRACTIONS AND DECIMALS

- R: Place value and ordering decimal fractions
C: **To understand equivalence of common and decimal fractions**

LESSON A9 ADDITION AND SUBTRACTION OF DECIMALS

- R: Revision of decimal place value
C: **To be able to add and subtract decimals mentally**
E: Written methods of addition and subtraction of decimals

**LESSON A10 PROBLEMS INVOLVING MONEY AND LENGTH**

- R: Revision of equivalence between pounds and pence and millimetres, centimetres, metres and kilometres.
- C: To use the four rules to solve problems involving length and money.**
- E: Using more than one procedure in solving problems

LESSON A11 FRACTIONS AND PERCENTAGES OF QUANTITIES

- R: The Fractions Decimals and Percentages Number Line
- C: To find fractions and percentages of quantities**

LESSON A12 PROBLEMS INVOLVING WEIGHT AND CAPACITY

- R: Equivalence of grams and kilograms and millilitres and litres.
- C: To have an awareness of the weights and capacities of everyday objects.**
- E: To be able to solve problems involving weight and capacity

LESSON A13 TIME

- R: Revision of am/pm, o'clock, half past, quarter past and quarter to.
- C: To ensure familiarity with 12 and 24 hour clock times**
- E: Interpreting timetables

NOTE: *It is intended that all aspects of the following sections of the syllabus will be covered in Lessons A1 to A13*

*Numbers and Number Systems
Calculations
Fractions, Decimals and Percentages
Solving Problems
Measures (1) and (2)*

In is anticipated that the other sections of the syllabus i.e.

*Data handling
Measures (3) and (4)
Shape and Space*

will be covered through appropriate additional activities.