

MATHEMATICS - SCHEMES OF WORK

For Children Aged 7 to 12

Mathematics Lessons Structure

Time – Approx. 90 minutes

1. Remind class of last topic area explored and relate to current topic.
2. Discuss and explore with concrete and abstract examples.
3. Experiments – where appropriate, possible and necessary.
4. Drama – Pupils enact areas of topic where appropriate.
5. Group Work – Set small groups an area to explore.
6. Practical Application – Discuss how topic area is applied in every life.
7. Making Connections – Discuss and explore connections between topic and other topic areas and subjects.
8. Media – Using video clips and programmes and/or computer programmes and websites where appropriate.
9. Individual Activity Work.
10. Plenary – Learning From Mistakes.
11. Quiz.

Resources

1. Maths Books
2. BBC Primary Learning
3. DK Maths
4. National Numeracy Strategy
5. CGP Workbooks
6. Past SATS Tests
7. Number Beads 1 – 10, 1 – 1000
8. Number Cards – Small & Large
9. Number Rods – Small
10. Montessori Fractions Set
11. Montessori Geometry Shapes – 2D & 3D
12. Calculators
13. Measuring Equipment
14. Number Games
15. Internet
16. Apple Mac & PC Windows Computer & Programmes

Mathematics Subject Areas

1. Numbers & Number Systems
2. Calculations
3. Mathematical Problems & Puzzles
4. Measurements
5. Geometry
6. Data / Statistics

YEAR 3

Autumn Term

1. NUMBERS & NUMBER SYSTEMS

1. Numbers & Mathematics

- a. Origins of Numbers
- b. Nature & Function of Numbers

2. Counting & Number Sequences

- a. Counting in 2's, 3's, 4's & 5's
- b. Counting in Tens
- c. Counting in Hundreds
- d. Counting in Thousands

3. Place Value

- a. Units
- b. Tens
- c. Hundreds
- d. Thousands
- e. Number Lines

4. Even / Odd Numbers

- a. Even Numbers
- b. Odd Numbers

5. Written Numbers

- a. Words to Numbers
- b. Numbers to Words

6. Estimating & Rounding

- a. Quantities
- b. Addition
- c. Subtraction

7. Mathematical Symbols

- a. +, -
- b. >, < and =

2. CALCULATIONS

8. Addition

- a. Single Digit Addition
- b. Mental Addition Strategies
- c. Number Bonds to 10

9. Subtraction

- a. Single Digit Subtraction
- b. Subtraction – The Inverse of Addition
- c. Mental Subtraction Strategies
- d. Inverse Number Bonds to 10

10. Multiplication

- a. Doubling Numbers

11. Division

- a. Sharing Quantities
- b. Halving Numbers

12. Checking Results

- a. Repeating Addition in Different Order
- b. Check with Inverse Sum
- c. Checking Through Approximating

3. MATHEMATICAL PROBLEMS & PUZZLES

13. Making Decisions

- a. Choosing Appropriate Number Operations for Addition & Subtraction Problems

14. Reasoning About Numbers & Shapes

- a. Solving Simple Mathematics Problems & Puzzles
- b. Experimenting with Mathematical Statements
- c. Explaining Methods and Reasoning Orally

15. Solving Real Life Mathematical Problems

- a. Mathematical Problems Involving Additions
- b. Mathematical Problems Involving Subtractions

4. MEASUREMENTS

- 16. Understanding the Vocabulary of Measurements
 - a. Length
 - b. Width

- 17. Understanding the Vocabulary of Time
 - a. Seconds, Minutes & Hours
 - b. AM & PM
 - c. Days & Weeks
 - d. Months & Years

- 18. Using Measurement Equipment
 - a. Using Rulers

- 19. Using Standard Unit Measurement Formulas & Symbols
 - a. Centimetres – cm

Spring Term

1. NUMBERS & NUMBER SYSTEMS

- 20. Numbers & Mathematics
 - a. Origins of Numbers
 - b. Nature & Function of Numbers

- 21. Counting & Number Sequences
 - a. Counting in 2's, 3's, 4's & 5's
 - b. Counting in Tens
 - c. Counting in Hundreds
 - d. Counting in Thousands

22. Place Value
- a. Units
 - b. Tens
 - c. Hundreds
 - d. Thousands
 - e. Number Lines
 - f. Positive & Negative Whole Numbers

23. Even / Odd Numbers

- a. Even Numbers
- b. Odd Numbers

24. Written Numbers

- a. Words to Numbers
- b. Numbers to Words

25. Estimating & Rounding

- a. Quantities
- b. Addition
- c. Subtraction

26. Mathematical Symbols

- a. +, -, x and division symbol
- b. >, < and =

2. CALCULATIONS

27. Addition

- a. Single Digit Addition
- b. Mental Addition Strategies
- c. Number Bonds to 10
- d. Two & More Digit Addition
- e. Using Columns for Addition

28. Subtraction

- a. Single Digit Subtraction
- b. Subtraction – The Inverse of Addition
- c. Mental Subtraction Strategies
- d. Inverse Number Bonds to 10

- e. Two or More Digit Subtraction
- f. Using Columns for Subtraction

29. Multiplication

- a. Doubling Numbers
- b. 2, 3, 4 & 5 Times Tables
- c. Times Tables Patterns & Strategies

30. Division

- a. Sharing Quantities
- b. Halving Numbers
- c. Division – The Inverse of Multiplication

31. Checking Results

- a. Repeating Addition in Different Order
- b. Check with Inverse Sum
- c. Repeating Multiplication in Different Order
- d. Checking Through Approximating

3. MATHEMATICAL PROBLEMS & PUZZLES

32. Making Decisions

- a. Choosing Appropriate Number Operations for Addition & Subtraction Problems

33. Reasoning About Numbers & Shapes

- a. Solving Simple Mathematics Problems & Puzzles
- b. Experimenting with Mathematical Statements
- c. Explaining Methods and Reasoning Orally

34. Solving Real Life Mathematical Problems

- a. Mathematical Problems Involving Additions
- b. Mathematical Problems Involving Subtractions
- c. Mathematical Problems Involving Time

4. MEASUREMENTS

35. Understanding the Vocabulary of Measurements

- a. Length
- b. Width

36. Understanding the Vocabulary of Time

- a. Seconds, Minutes & Hours
- b. AM & PM
- c. Days & Weeks
- d. Months & Years
- e. Timetables
- f. Calendars
- g. Analogue Clocks
- h. Digital Clocks

37. Using Measurement Equipment

- a. Using Rulers

38. Using Standard Unit Measurement Formulas & Symbols

- a. Centimetres – cm
- b. Metres – m
- c. Millimetres – mm

5. GEOMETRY

39. 2-D Shapes

- a. Circles
 - i. Properties & Features
 - ii. Real Life Examples
 - iii. Degrees – 360 degrees
 - iv. Semi-circles
- b. Squares
 - i. Properties & Features
 - ii. Real Life Examples
 - iii. Right Angles – 90 degrees
- c. Rectangles
 - i. Properties & Features
 - ii. Real Life Examples
 - iii. Right Angles – 90 degrees
- d. Triangles

- i. Properties & Features
- ii. Real Life Examples

Summer Term

1. NUMBERS & NUMBER SYSTEMS

40. Numbers & Mathematics

- a. Origins of Numbers
- b. Nature & Function of Numbers

41. Counting & Number Sequences

- a. Counting in 2's, 3's, 4's & 5's
- b. Counting in Tens
- c. Counting in Hundreds
- d. Counting in Thousands

42. Place Value

- a. Units
- b. Tens
- c. Hundreds
- d. Thousands
- e. Number Lines
- f. Positive & Negative Whole Numbers
- g. Ratio & Proportion

43. Even / Odd Numbers

- a. Even Numbers
- b. Odd Numbers

44. Written Numbers

- a. Words to Numbers
- b. Numbers to Words

45. Estimating & Rounding

- a. Quantities
- b. Addition
- c. Subtraction

46. Mathematical Symbols

- a. +, -, x and division symbol
- b. >, < and =

2. CALCULATIONS

47. Addition

- a. Single Digit Addition
- b. Mental Addition Strategies
- c. Number Bonds to 10
- d. Two & More Digit Addition
- e. Using Columns for Addition

48. Subtraction

- a. Single Digit Subtraction
- b. Subtraction – The Inverse of Addition
- c. Mental Subtraction Strategies
- d. Inverse Number Bonds to 10
- e. Two or More Digit Subtraction
- f. Using Columns for Subtraction

49. Multiplication

- a. Doubling Numbers
- b. The Times Tables to 12 x
- c. Times Tables Patterns & Strategies

50. Division

- a. Sharing Quantities
- b. Halving Numbers
- c. Division – The Inverse of Multiplication

51. Checking Results

- a. Repeating Addition in Different Order
- b. Check with Inverse Sum
- c. Repeating Multiplication in Different Order
- d. Checking Through Approximating

3. MATHEMATICAL PROBLEMS & PUZZLES

52. Making Decisions

- a. Choosing Appropriate Number Operations for Addition & Subtraction Problems

53. Reasoning About Numbers & Shapes

- a. Solving Simple Mathematics Problems & Puzzles
- b. Experimenting with Mathematical Statements
- c. Explaining Methods and Reasoning Orally

54. Solving Real Life Mathematical Problems

- a. Mathematical Problems Involving Additions
- b. Mathematical Problems Involving Subtractions
- c. Mathematical Problems Involving Shapes
- d. Mathematical Problems Involving Time
- e. Stories with Mathematical Problems

4. MEASUREMENTS

55. Understanding the Vocabulary of Measurements

- a. Length
- b. Width

56. Understanding the Vocabulary of Time

- a. Seconds, Minutes & Hours
- b. AM & PM
- c. Days & Weeks
- d. Months & Years
- e. Timetables
- f. Calendars
- g. Analogue Clocks
- h. Digital Clocks

57. Using Measurement Equipment

- a. Using Rulers

58. Using Standard Unit Measurement Formulas & Symbols

- a. Centimetres – cm
- b. Metres – m
- c. Millimetres – mm

5. GEOMETRY

59. Space

- a. Position
- b. Horizontal
 - i. Vertical
 - ii. Parallel
 - iii. Perpendicular
- c. Compass Position
 - i. N, E, S & W
 - ii. NE, NW, SE & SW
- d. Direction
- e. Movement

60. Symmetry

- a. Reflection
- b. Symmetrical Patterns
- c. Repeating Patterns

YEAR 4

Autumn Term

1. NUMBERS & NUMBER SYSTEMS

1. Counting & Number Sequences

- a. Counting in 10's, 20's – 90's
- b. Counting in Hundreds
- c. Counting in Thousands

2. Place Value

- a. Millions
- b. Number Lines

- c. Positive & Negative Whole Numbers
- d. Ratio & Proportion

3. Estimating & Rounding

- a. Quantities
- b. Addition
- c. Subtraction
- d. Multiplication

2. CALCULATIONS

4. Addition

- a. Mental Addition Strategies
- b. Two & More Digit Addition
- c. Number Bonds to 100
- d. Addition with Carrying

5. Subtraction

- a. Mental Subtraction Strategies
- b. Two or More Digit Subtraction
- c. Inverse Number Bonds to 100
- d. Subtraction with Borrowing

6. Multiplication

- a. The 2, 3, 4 & 5 Times Tables
- b. Times Tables Patterns & Strategies

7. Division

- a. Division & The Times Table

8. Checking Results

- a. Repeating Addition in Different Order
- b. Check with Inverse Sum
- c. Repeating Multiplication in Different Order
- d. Checking Through Approximating

3. MATHEMATICAL PROBLEMS & PUZZLES

9. Making Decisions

- a. Choosing Appropriate Number Operations for Addition & Subtraction Problems

10. Reasoning About Numbers & Shapes

- a. Solving Simple Mathematics Problems & Puzzles
- b. Experimenting with Mathematical Statements
- c. Explaining Methods and Reasoning Orally

11. Solving Real Life Mathematical Problems

- a. Mathematical Problems Involving Additions
- b. Mathematical Problems Involving Subtractions
- c. Mathematical Problems Involving Multiplying
- d. Mathematical Problems Involving Sharing
- e. Mathematical Problems Involving Shapes
- f. Mathematical Problems Involving Time
- g. Stories with Mathematical Problems

4. MEASUREMENTS

12. Understanding the Vocabulary of Measurements

- a. Length
- b. Width
- c. Depth
- d. Angles

13. Understanding the Vocabulary of Time

- a. 24 Hour Clocks

14. Using Measurement Equipment

- a. Using Rulers
- b. Using Protractors

15. Using Standard Unit Measurement Formulas & Symbols

- a. Kilometres – km

5. GEOMETRY

16. 2-D Shapes

- a. Triangles
 - i. Properties & Features
 - ii. Real Life Examples
 - iii. Equilateral Triangles
 - iv. Isosceles Triangles
 - v. Scalene Triangles
 - vi. Acute & Obtuse Angles

17. Space

- a. Position
 - i. Horizontal
 - ii. Vertical
 - iii. Parallel
 - iv. Perpendicular
- b. Compass Position
 - i. N, E, S & W
 - ii. NE, NW, SE & SW
- c. Direction
- d. Movement

18. Symmetry

- a. Reflection
- b. Symmetrical Patterns
- c. Repeating Patterns
- d. Rotating Patterns
 - i. Turns – Whole, Half, Quarter etc...
 - ii. Clockwise
 - iii. Anti-clockwise
 - iv. Rotating at Different Degrees
- e. Line Symmetry
- f. Axes of Symmetry

Spring Term

1. NUMBERS & NUMBER SYSTEMS

19. Counting & Number Sequences

- a. Counting in 6's, 7's, 8's & 9's
- b. Counting in 10's, 20's – 90's

- c. Counting in Hundreds
- d. Counting in Thousands

20. Place Value

- a. Millions
- b. Number Lines
- c. Positive & Negative Whole Numbers
- d. Ratio & Proportion

21. Estimating & Rounding

- a. Quantities
- b. Addition
- c. Subtraction
- d. Multiplication
- e. Division

2. CALCULATIONS

22. Addition

- a. Mental Addition Strategies
- b. Two & More Digit Addition
- c. Number Bonds to 100
- d. Addition with Carrying
- e. Combined Addition & Subtraction
- f. Adding Cash Amounts

23. Subtraction

- a. Mental Subtraction Strategies
- b. Two or More Digit Subtraction
- c. Inverse Number Bonds to 100
- d. Subtraction with Borrowing
- e. Combined Subtraction & Addition
- f. Subtracting Cash Amounts

24. Multiplication

- a. The 6, 7, 8 & 9 Times Tables
- b. Times Tables Patterns & Strategies

25. Division

- a. Division & The Times Table

26. Checking Results

- a. Repeating Addition in Different Order
- b. Check with Inverse Sum
- c. Repeating Multiplication in Different Order
- d. Checking Through Approximating

3. MATHEMATICAL PROBLEMS & PUZZLES

27. Making Decisions

- a. Choosing Appropriate Number Operations for Addition & Subtraction Problems
- b. Choosing Appropriate Number Operations for Single Digit Multiplication & Division Problems

28. Reasoning About Numbers & Shapes

- a. Solving Simple Mathematics Problems & Puzzles
- b. Experimenting with Mathematical Statements
- c. Explaining Methods and Reasoning Orally

29. Solving Real Life Mathematical Problems

- a. Mathematical Problems Involving Additions
- b. Mathematical Problems Involving Subtractions
- c. Mathematical Problems Involving Multiplying
- d. Mathematical Problems Involving Sharing
- e. Mathematical Problems Involving Shapes
- f. Mathematical Problems Involving Money
 - i. Transactions
 - ii. Accounts
- g. Mathematical Problems Involving Time
- h. Stories with Mathematical Problems

4. MEASUREMENTS

30. Understanding the Vocabulary of Measurements

- a. Depth
- b. Angles

31. Understanding the Vocabulary of Time

- a. 24 Hour Clocks

32. Using Measurement Equipment

- a. Using Rulers
- b. Using Protractors

33. Using Standard Unit Measurement Formulas & Symbols

- a. Inches
- b. Feet
- c. Yards
- d. Miles

5. GEOMETRY

34. 2-D Shapes

- a. Triangles
 - i. Properties & Features
 - ii. Real Life Examples
 - iii. Equilateral Triangles
 - iv. Isosceles Triangles
 - v. Scalene Triangles
 - vi. Acute & Obtuse Angles

35. Space

- a. Position
 - i. Horizontal
 - ii. Vertical
 - iii. Parallel
 - iv. Perpendicular
- b. Compass Position
 - i. N, E, S & W
 - ii. NE, NW, SE & SW
- c. Direction
- d. Movement

36. Symmetry

- a. Reflection
- b. Symmetrical Patterns

- c. Repeating Patterns
- d. Rotating Patterns
 - i. Turns – Whole, Half, Quarter etc...
 - ii. Clockwise
 - iii. Anti-clockwise
 - iv. Rotating at Different Degrees
- e. Line Symmetry
- f. Axes of Symmetry

6. DATA / STATISTICS

37. Understanding Data

- a. Understanding Data & Statistics
- b. Use & Misuse of Data
- c. Classification
- d. Organisation
- e. Interpretation

38. Organising Data

- a. Lists
- b. Tables

Summer Term

1. NUMBERS & NUMBER SYSTEMS

39. Counting & Number Sequences

- a. Counting in 6's, 7's, 8's & 9's
- b. Counting Backwards

40. Place Value

- a. Millions
- b. Basic Fractions
- c. Number Lines
- d. Positive & Negative Whole Numbers
- e. Ratio & Proportion

41. Estimating & Rounding

- a. Quantities

- b. Addition
- c. Subtraction
- d. Multiplication
- e. Division

42. Mathematical Symbols

- a. Fraction symbols

2. CALCULATIONS

43. Addition

- a. Mental Addition Strategies
- b. Two & More Digit Addition
- c. Number Bonds to 100
- d. Addition with Carrying
- e. Combined Addition & Subtraction
- f. Adding Cash Amounts
- g. Adding Fractions
- h. Adding Whole Numbers with Fractions

44. Subtraction

- a. Mental Subtraction Strategies
- b. Two or More Digit Subtraction
- c. Inverse Number Bonds to 100
- d. Subtraction with Borrowing
- e. Combined Subtraction & Addition
- f. Subtracting Cash Amounts
- g. Subtracting Fractions
- h. Subtracting Whole Numbers with Fractions

45. Multiplication

- a. The Times Tables to 9 x
- b. Times Tables Patterns & Strategies

46. Division

- a. Division & The Times Table
- b. Division with Remainders

47. Checking Results

- a. Repeating Addition in Different Order

- b. Check with Inverse Sum
- c. Repeating Multiplication in Different Order
- d. Checking Through Approximating

3. MATHEMATICAL PROBLEMS & PUZZLES

48. Making Decisions

- a. Choosing Appropriate Number Operations for Addition & Subtraction Problems
- b. Choosing Appropriate Number Operations for Single Digit Multiplication & Division Problems

49. Reasoning About Numbers & Shapes

- a. Solving Simple Mathematics Problems & Puzzles
- b. Experimenting with Mathematical Statements
- c. Explaining Methods and Reasoning Orally

50. Solving Real Life Mathematical Problems

- a. Mathematical Problems Involving Additions
- b. Mathematical Problems Involving Subtractions
- c. Mathematical Problems Involving Multiplying
- d. Mathematical Problems Involving Sharing
- e. Mathematical Problems Involving Shapes
- f. Mathematical Problems Involving Money
 - i. Transactions
 - ii. Accounts
- g. Mathematical Problems Involving Time
- h. Stories with Mathematical Problems

4. MEASUREMENTS

51. Understanding the Vocabulary of Measurements

- a. Length
- b. Width
- c. Depth
- d. Angles

52. Understanding the Vocabulary of Time

- a. 24 Hour Clocks

53. Using Measurement Equipment

- a. Using Rulers
- b. Using Protractors

54. Using Standard Unit Measurement Formulas & Symbols

- a. Kilometres – km
- b. Inches
- c. Feet
- d. Yards
- e. Miles

6. DATA / STATISTICS

55. Understanding Data

- a. Understanding Data & Statistics
- b. Use & Misuse of Data
- c. Classification
- d. Organisation
- e. Interpretation

56. Organising Data

- a. Lists
- b. Tables
- c. Diagrams
 - i. Pictograms
- d. Graphs
 - i. Block Graphs
 - ii. Line Graphs
- e. Charts
 - i. Bar Charts
 - ii. Bar Line Charts

YEAR 5

Autumn Term

1. NUMBERS & NUMBER SYSTEMS

1. Place Value

- a. Decimals
- b. Converting Basic Fractions into Decimals & Vice Versa
- c. Number Lines
- d. Positive & Negative Whole Numbers
- e. Ratio & Proportion

2. Estimating & Rounding

- a. Quantities
- b. Addition
- c. Subtraction
- d. Multiplication
- e. Division

3. Mathematical Symbols

- a. Advanced Mathematical Symbols

2. CALCULATIONS

4. Addition

- a. Mental Addition Strategies
- b. Two & More Digit Addition
- c. Number Bonds to 100
- d. Addition with Carrying
- e. Combined Addition & Subtraction
- f. Other Partition Sums
- g. Decimal Bonds to 1.0
- h. Addition with Whole Numbers plus Decimals
- i. Adding Cash Amounts
- j. Adding Fractions
- k. Adding Whole Numbers with Fractions

5. Subtraction

- a. Mental Subtraction Strategies

- b. Two or More Digit Subtraction
- c. Inverse Number Bonds to 100
- d. Subtraction with Borrowing
- e. Combined Subtraction & Addition
- f. Other Partition Sums
- g. Inverse Decimal Bonds to 1.0
- h. Subtraction with Whole Numbers plus Decimals
- i. Subtracting Cash Amounts
- j. Subtracting Fractions
- k. Subtracting Whole Numbers with Fractions

6. Multiplication

- a. The 10, 11 & 12 Times Tables
- b. Times Tables Patterns & Strategies

7. Checking Results

- a. Repeating Addition in Different Order
- b. Check with Inverse Sum
- c. Repeating Multiplication in Different Order
- d. Checking Through Approximating
- e. Checking Answers Using a Calculator

3. MATHEMATICAL PROBLEMS & PUZZLES

8. Making Decisions

- a. Choosing Appropriate Number Operations for Addition & Subtraction Problems
- b. Choosing Appropriate Number Operations for Multiplication & Division Problems
- c. Choosing Appropriate Number Operations Using a Calculator

9. Reasoning About Numbers & Shapes

- a. Experimenting with Mathematical Statements
- b. Solving Mathematics Problems & Puzzles
- c. Explaining Methods and Reasoning Orally
- d. Expressing Numbers in a Formula

10. Solving Real Life Mathematical Problems

- a. Mathematical Problems Involving Additions
- b. Mathematical Problems Involving Subtractions
- c. Mathematical Problems Involving Multiplying

- d. Mathematical Problems Involving Sharing
- e. Mathematical Problems Involving Shapes
- f. Mathematical Problems Involving Distance
- g. Mathematical Problems Involving Money
 - i. Transactions
 - ii. Accounts
- h. Mathematical Problems Involving Time
- i. Mathematical Problems Involving Conversions
- j. Stories with Mathematical Problems

4. MEASUREMENTS

11. Understanding the Vocabulary of Measurements

- a. Depth
- b. Angles
- c. Perimeter

12. Understanding the Vocabulary of Time

- a. World Time Zones

13. Using Measurement Equipment

- a. Using Rulers
- b. Using Protractors

14. Using Standard Unit Measurement Formulas & Symbols

- a. Centimetres – cm
- b. Metres – m
- c. Millimetres – mm
- d. Kilometres – km
- e. Square Centimetres – cm²
- f. Square Metres – m²
- g. Inches
- h. Feet
- i. Yards
- j. Miles

5. GEOMETRY

15. 2-D Shapes

- a. Pentagons
 - i. Properties & Features
 - ii. Real Life Examples
 - iii. Angles – 72 degrees
- b. Hexagons
 - i. Properties & Features
 - ii. Real Life Examples
 - iii. Angles – 60 degrees
- c. Octagons
 - i. Properties & Features
 - ii. Real Life Examples
 - iii. Angles – 45 degrees

16. Space

- a. Position
 - i. Horizontal
 - ii. Vertical
 - iii. Parallel
 - iv. Perpendicular
- b. Direction
- c. Movement
- d. Grids
 - i. Rows & Columns
 - ii. Co-ordinates

17. Symmetry

- a. Reflection
- b. Symmetrical Patterns
- c. Repeating Patterns
- d. Rotating Patterns
 - i. Turns – Whole, Half, Quarter etc...
 - ii. Clockwise
 - iii. Anti-clockwise
 - iv. Rotating at Different Degrees
- e. Line Symmetry
- f. Axes of Symmetry

6. DATA / STATISTICS

18. Understanding Data

- a. Understanding Data & Statistics
- b. Use & Misuse of Data
- c. Classification
- d. Organisation
- e. Interpretation
- f. Accuracy
- g. Probability
- h. Uncertainty

19. Organising Data

- a. Lists
- b. Tables
- c. Diagrams
 - i. Pictograms
 - ii. Venn Diagrams
 - iii. Carroll Diagrams
- d. Graphs
 - i. Block Graphs
 - ii. Line Graphs
- e. Charts
 - i. Bar Charts
 - ii. Bar Line Charts
 - iii. Pie Charts

Spring Term

1. NUMBERS & NUMBER SYSTEMS

20. Counting & Number Sequences

- a. Prime Numbers

21. Place Value

- a. Decimals
- b. Converting Fractions into Decimals & Vice Versa
- c. Number Lines
- d. Positive & Negative Whole Numbers
- e. Ratio & Proportion

22. Estimating & Rounding

- a. Quantities
- b. Addition
- c. Subtraction
- d. Multiplication
- e. Division

23. Mathematical Symbols

- a. Advanced Mathematical Symbols

2. CALCULATIONS

24. Addition

- a. Mental Addition Strategies
- b. Two & More Digit Addition
- c. Number Bonds to 100
- d. Addition with Carrying
- e. Combined Addition & Subtraction
- f. Other Partition Sums
- g. Decimal Bonds to 1.0
- h. Addition with Whole Numbers plus Decimals
- i. Adding Cash Amounts
- j. Adding Decimal Numbers
- k. Adding Fractions
- l. Adding Whole Numbers with Fractions

25. Subtraction

- a. Mental Subtraction Strategies
- b. Two or More Digit Subtraction
- c. Inverse Number Bonds to 100
- d. Subtraction with Borrowing
- e. Combined Subtraction & Addition
- f. Other Partition Sums
- g. Inverse Decimal Bonds to 1.0
- h. Subtraction with Whole Numbers plus Decimals
- i. Subtracting Cash Amounts
- j. Subtracting Decimal Numbers
- k. Subtracting Fractions
- l. Subtracting Whole Numbers with Fractions

26. Multiplication

- a. The Times Tables to 12 x
- b. Times Tables Patterns & Strategies
- c. Multiplication Using a Calculator

27. Division

- a. Division Using a Calculator

28. Combined Calculations

- a. Averages
 - i. Median
 - ii. Mean

29. Checking Results

- a. Repeating Addition in Different Order
- b. Check with Inverse Sum
- c. Repeating Multiplication in Different Order
- d. Checking Through Approximating
- e. Checking Answers Using a Calculator

3. MATHEMATICAL PROBLEMS & PUZZLES

30. Making Decisions

- a. Choosing Appropriate Number Operations for Addition & Subtraction Problems
- b. Choosing Appropriate Number Operations for Multiplication & Division Problems
- c. Choosing Appropriate Number Operations Using a Calculator

31. Reasoning About Numbers & Shapes

- a. Experimenting with Mathematical Statements
- b. Solving Mathematics Problems & Puzzles
- c. Explaining Methods and Reasoning Orally
- d. Expressing Numbers in a Formula

32. Solving Real Life Mathematical Problems

- a. Mathematical Problems Involving Additions
- b. Mathematical Problems Involving Subtractions

- c. Mathematical Problems Involving Multiplying
- d. Mathematical Problems Involving Sharing
- e. Mathematical Problems Involving Shapes
- f. Mathematical Problems Involving Distance
- g. Mathematical Problems Involving Money
 - i. Transactions
 - ii. Accounts
- h. Mathematical Problems Involving Time
- i. Mathematical Problems Involving Conversions
- j. Mathematical Problems Involving Averages
- k. Stories with Mathematical Problems

4. MEASUREMENTS

33. Understanding the Vocabulary of Measurements

- a. Depth
- b. Angles
- c. Perimeter
- d. Mass
- e. Capacity

34. Using Measurement Equipment

- a. Using Rulers
- b. Using Protractors
- c. Using Scales

35. Using Standard Unit Measurement Formulas & Symbols

- a. Grams – g
- b. Kilograms – kg
- c. Millilitres – ml
- d. Litres – l
- e. Pints
- f. Gallons

5. GEOMETRY

36. 3-D Shapes

- a. Cubes
 - i. Properties & Features
 - ii. Real Life Examples

- iii. Making Shape
- iv. Drawing Shape
- b. Cuboids
 - i. Properties & Features
 - ii. Real Life Examples
 - iii. Making Shape
 - iv. Drawing Shape
- c. Spheres & Hemi-spheres
 - i. Properties & Features
 - ii. Real Life Examples
 - iii. Making Shape
 - iv. Drawing Shape

37. Space

- a. Position
 - i. Horizontal
 - ii. Vertical
 - iii. Parallel
 - iv. Perpendicular
- b. Direction
- c. Movement
- d. Grids
 - i. Rows & Columns
 - ii. Co-ordinates

38. Symmetry

- a. Reflection
- b. Symmetrical Patterns
- c. Repeating Patterns
- d. Rotating Patterns
 - i. Turns – Whole, Half, Quarter etc...
 - ii. Clockwise
 - iii. Anti-clockwise
 - iv. Rotating at Different Degrees
- e. Line Symmetry
- f. Axes of Symmetry

6. DATA / STATISTICS

39. Understanding Data

- a. Understanding Data & Statistics
- b. Use & Misuse of Data
- c. Classification
- d. Organisation

- e. Interpretation
- f. Accuracy
- g. Probability
- h. Uncertainty
- i. Mode
- j. Range
- k. Median
- l. Mean

40. Organising Data

- a. Lists
- b. Tables
- c. Diagrams
 - i. Pictograms
 - ii. Venn Diagrams
 - iii. Carroll Diagrams
- d. Graphs
 - i. Block Graphs
 - ii. Line Graphs
- e. Charts
 - i. Bar Charts
 - ii. Bar Line Charts
 - iii. Pie Charts
- f. Databases
- g. Organising Data on a Computer

Summer Term

1. NUMBERS & NUMBER SYSTEMS

41. Counting & Number Sequences

- a. Prime Numbers

42. Place Value

- a. Decimals
- b. Converting Fractions into Decimals & Vice Versa
- c. Number Lines
- d. Positive & Negative Whole Numbers
- e. Ratio & Proportion

43. Estimating & Rounding

- a. Quantities

- b. Addition
- c. Subtraction
- d. Multiplication
- e. Division

44. Mathematical Symbols

- a. Advanced Mathematical Symbols

2. CALCULATIONS

45. Addition

- a. Mental Addition Strategies
- b. Two & More Digit Addition
- c. Number Bonds to 100
- d. Addition with Carrying
- e. Combined Addition & Subtraction
- f. Other Partition Sums
- g. Decimal Bonds to 1.0
- h. Addition with Whole Numbers plus Decimals
- i. Adding Cash Amounts
- j. Adding Decimal Numbers
- k. Adding Fractions
- l. Adding Whole Numbers with Fractions

46. Subtraction

- a. Mental Subtraction Strategies
- b. Two or More Digit Subtraction
- c. Inverse Number Bonds to 100
- d. Subtraction with Borrowing
- e. Combined Subtraction & Addition
- f. Other Partition Sums
- g. Inverse Decimal Bonds to 1.0
- h. Subtraction with Whole Numbers plus Decimals
- i. Subtracting Cash Amounts
- j. Subtracting Decimal Numbers
- k. Subtracting Fractions
- l. Subtracting Whole Numbers with Fractions

47. Multiplication

- a. The Times Tables to 12 x
- b. Times Tables Patterns & Strategies
- c. Long Multiplication
- d. Using Columns for Multiplication

- e. Partition Sums
- f. Multiplying Cash Amount
- g. Multiplication Using a Calculator

48. Division

- a. Division Using a Calculator

49. Combined Calculations

- a. Averages
 - i. Median
 - ii. Mean
- b. Converting Numbers

50. Checking Results

- a. Repeating Addition in Different Order
- b. Check with Inverse Sum
- c. Repeating Multiplication in Different Order
- d. Checking Through Approximating
- e. Checking Answers Using a Calculator

3. MATHEMATICAL PROBLEMS & PUZZLES

51. Making Decisions

- a. Choosing Appropriate Number Operations for Addition & Subtraction Problems
- b. Choosing Appropriate Number Operations for Multiplication & Division Problems
- c. Choosing Appropriate Number Operations Using a Calculator

52. Reasoning About Numbers & Shapes

- a. Experimenting with Mathematical Statements
- b. Solving Mathematics Problems & Puzzles
- c. Explaining Methods and Reasoning Orally
- d. Expressing Numbers in a Formula

53. Solving Real Life Mathematical Problems

- a. Mathematical Problems Involving Additions
- b. Mathematical Problems Involving Subtractions
- c. Mathematical Problems Involving Multiplying
- d. Mathematical Problems Involving Sharing

- e. Mathematical Problems Involving Shapes
- f. Mathematical Problems Involving Distance
- g. Mathematical Problems Involving Money
 - i. Transactions
 - ii. Accounts
- h. Mathematical Problems Involving Time
- i. Mathematical Problems Involving Conversions
- j. Mathematical Problems Involving Averages
- k. Stories with Mathematical Problems

4. MEASUREMENTS

54. Understanding the Vocabulary of Measurements

- a. Depth
- b. Angles
- c. Perimeter
- d. Mass
- e. Capacity

55. Using Measurement Equipment

- a. Using Rulers
- b. Using Protractors
- c. Using Scales

56. Using Standard Unit Measurement Formulas & Symbols

- a. Centimetres – cm
- b. Metres – m
- c. Millimetres – mm
- d. Kilometres – km
- e. Square Centimetres – cm²
- f. Square Metres – m²
- g. Inches
- h. Feet
- i. Yards
- j. Miles
- k. Grams – g
- l. Kilograms – kg
- m. Millilitres – ml
- n. Litres – l
- o. Pints
- p. Gallons
- q. Conversions
 - i. Converting Larger to Smaller Units

- ii. Converting Smaller to Larger Units

5. GEOMETRY

57. Space

- a. Position
 - i. Horizontal
 - ii. Vertical
 - iii. Parallel
 - iv. Perpendicular
- b. Direction
- c. Movement
- d. Grids
 - i. Rows & Columns
 - ii. Co-ordinates

58. Symmetry

- a. Reflection
- b. Symmetrical Patterns
- c. Repeating Patterns
- d. Rotating Patterns
 - i. Turns – Whole, Half, Quarter etc...
 - ii. Clockwise
 - iii. Anti-clockwise
 - iv. Rotating at Different Degrees
- e. Line Symmetry
- f. Axes of Symmetry

6. DATA / STATISTICS

59. Understanding Data

- a. Understanding Data & Statistics
- b. Use & Misuse of Data
- c. Classification
- d. Organisation
- e. Interpretation
- f. Accuracy
- g. Probability
- h. Uncertainty
- i. Mode
- j. Range
- k. Median
- l. Mean

60. Organising Data

- a. Lists
- b. Tables
- c. Diagrams
 - i. Pictograms
 - ii. Venn Diagrams
 - iii. Carroll Diagrams
- d. Graphs
 - i. Block Graphs
 - ii. Line Graphs
- e. Charts
 - i. Bar Charts
 - ii. Bar Line Charts
 - iii. Pie Charts
- f. Databases
- g. Organising Data on a Computer

YEAR 6

Autumn Term

1. NUMBERS & NUMBER SYSTEMS

61. Numbers & Mathematics

- a. History of Mathematics
 - i. Ancient Mathematics
 - ii. Medieval Mathematics
 - iii. Modern Mathematics

62. Counting & Number Sequences

- a. Square Numbers

63. Place Value

- a. Number Lines
- b. Positive & Negative Whole Numbers
- c. Ratio & Proportion

64. Estimating & Rounding

- a. Multiplication
- b. Division

65. Mathematical Symbols

- a. Advanced Mathematical Symbols

2. CALCULATIONS

66. Addition

- a. Mental Addition Strategies
- b. Two & More Digit Addition
- c. Addition with Carrying
- d. Combined Addition & Subtraction
- e. Other Partition Sums
- f. Decimal Bonds to 1.0
- g. Addition with Whole Numbers plus Decimals
- h. Adding Cash Amounts
- i. Adding Decimal Numbers
- j. Adding Fractions
- k. Adding Whole Numbers with Fractions

67. Subtraction

- a. Mental Subtraction Strategies
- b. Two or More Digit Subtraction
- c. Subtraction with Borrowing
- d. Combined Subtraction & Addition
- e. Other Partition Sums
- f. Inverse Decimal Bonds to 1.0
- g. Subtraction with Whole Numbers plus Decimals
- h. Subtracting Cash Amounts
- i. Subtracting Decimal Numbers
- j. Subtracting Fractions
- k. Subtracting Whole Numbers with Fractions

68. Multiplication

- a. Doubling Numbers
- b. The Times Tables to 12 x
- c. Times Tables Patterns & Strategies
- d. Square Numbers
- e. Long Multiplication
- f. Using Columns for Multiplication
- g. Partition Sums
- h. Multiplying Cash Amount
- i. Multiplication Using a Calculator

69. Division
- a. Long Division
 - b. Partition Sums
 - c. Converting Division Remainders into Decimals
 - d. Long Division with Decimals Answers
 - e. Dividing Cash Amount
 - f. Division Using a Calculator

70. Combined Calculations

- a. Averages
 - i. Median
 - ii. Mean
- b. Percentages
- c. Converting Numbers

71. Checking Results

- a. Repeating Addition in Different Order
- b. Check with Inverse Sum
- c. Repeating Multiplication in Different Order
- d. Checking Through Approximating
- e. Checking Answers Using a Calculator

3. MATHEMATICAL PROBLEMS & PUZZLES

72. Making Decisions

- a. Choosing Appropriate Number Operations for Addition & Subtraction Problems
- b. Choosing Appropriate Number Operations for Multiplication & Division Problems
- c. Choosing Appropriate Number Operations Using a Calculator

73. Reasoning About Numbers & Shapes

- a. Experimenting with Mathematical Statements
- b. Solving Mathematics Problems & Puzzles
- c. Explaining Methods and Reasoning Orally
- d. Expressing Numbers in a Formula

74. Solving Real Life Mathematical Problems

- a. Mathematical Problems Involving Additions
- b. Mathematical Problems Involving Subtractions

- c. Mathematical Problems Involving Multiplying
- d. Mathematical Problems Involving Sharing
- e. Mathematical Problems Involving Shapes
- f. Mathematical Problems Involving Distance
- g. Mathematical Problems Involving Money
 - i. Transactions
 - ii. Accounts
- h. Mathematical Problems Involving Time
- i. Mathematical Problems Involving Conversions
- j. Mathematical Problems Involving Percentage
- k. Mathematical Problems Involving Averages
- l. Stories with Mathematical Problems

4. MEASUREMENTS

75. Understanding the Vocabulary of Measurements

- a. Angles
- b. Perimeter
- c. Mass
- d. Capacity

76. Using Measurement Equipment

- a. Using Rulers
- b. Using Protractors
- c. Using Scales

77. Using Standard Unit Measurement Formulas & Symbols

- a. Centimetres – cm
- b. Metres – m
- c. Millimetres – mm
- d. Kilometres – km
- e. Square Centimetres – cm²
- f. Square Metres – m²
- g. Inches
- h. Feet
- i. Yards
- j. Miles
- k. Grams – g
- l. Kilograms – kg
- m. Millilitres – ml
- n. Litres – l
- o. Pints
- p. Gallons

- q. Conversions
 - i. Converting Larger to Smaller Units
 - ii. Converting Smaller to Larger Units

5. GEOMETRY

78. 2-D Shapes

- a. Irregular Shapes
 - i. Properties & Features
 - ii. Real Life Examples
- iii. Angles

79. 3-D Shapes

- a. Cylinders
 - i. Properties & Features
 - ii. Real Life Examples
 - iii. Making Shape
 - iv. Drawing Shape
- b. Cones
 - i. Properties & Features
 - ii. Real Life Examples
 - iii. Making Shape
 - iv. Drawing Shape

80. Space

- a. Grids
 - i. Rows & Columns
 - ii. Co-ordinates

81. Symmetry

- a. Reflection
- b. Symmetrical Patterns
- c. Repeating Patterns
- d. Rotating Patterns
 - i. Turns – Whole, Half, Quarter etc...
 - ii. Clockwise
 - iii. Anti-clockwise
 - iv. Rotating at Different Degrees
- e. Line Symmetry
- f. Axes of Symmetry

6. DATA / STATISTICS

82. Understanding Data

- a. Use & Misuse of Data
- b. Classification
- c. Organisation
- d. Interpretation
- e. Accuracy
- f. Probability
- g. Uncertainty
- h. Mode
- i. Range
- j. Median
- k. Mean

83. Organising Data

- a. Lists
- b. Tables
- c. Diagrams
 - i. Pictograms
 - ii. Venn Diagrams
 - iii. Carroll Diagrams
- d. Graphs
 - i. Block Graphs
 - ii. Line Graphs
- e. Charts
- f. Bar Charts
 - i. Bar Line Charts
 - ii. Pie Charts
- g. Databases
- h. Organising Data on a Computer

Spring Term

1. NUMBERS & NUMBER SYSTEMS

84. Counting & Number Sequences

- a. Square Numbers

85. Place Value

- a. Number Lines
- b. Positive & Negative Whole Numbers
- c. Ratio & Proportion

86. Estimating & Rounding

- a. Multiplication
- b. Division

87. Mathematical Symbols

- a. Advanced Mathematical Symbols

2. CALCULATIONS

88. Addition

- a. Mental Addition Strategies
- b. Two & More Digit Addition
- c. Addition with Carrying
- d. Combined Addition & Subtraction
- e. Other Partition Sums
- f. Decimal Bonds to 1.0
- g. Addition with Whole Numbers plus Decimals
- h. Adding Cash Amounts
- i. Adding Decimal Numbers
- j. Adding Fractions
- k. Adding Whole Numbers with Fractions

89. Subtraction

- a. Mental Subtraction Strategies
- b. Two or More Digit Subtraction
- c. Subtraction with Borrowing
- d. Combined Subtraction & Addition
- e. Other Partition Sums
- f. Inverse Decimal Bonds to 1.0
- g. Subtraction with Whole Numbers plus Decimals
- h. Subtracting Cash Amounts
- i. Subtracting Decimal Numbers
- j. Subtracting Fractions
- k. Subtracting Whole Numbers with Fractions

90. Multiplication

- a. Doubling Numbers
- b. The Times Tables to 12 x
- c. Times Tables Patterns & Strategies
- d. Square Numbers
- e. Long Multiplication

- f. Using Columns for Multiplication
- g. Partition Sums
- h. Multiplication with Factors
- i. Multiplication with Whole Numbers Plus Decimals
- j. Multiplying Cash Amount
- k. Multiplying Whole Numbers Plus Fractions
- l. Multiplication Using a Calculator

91. Division

- a. Long Division
- b. Partition Sums
- c. Division with Factors
- d. Converting Division Remainders into Decimals
- e. Long Division with Decimals Answers
- f. Division with Whole Numbers plus Decimals
- g. Dividing Cash Amount
- h. Dividing Whole Numbers plus Fractions
- i. Division Using a Calculator

92. Combined Calculations

- a. Averages
 - i. Median
 - ii. Mean
- b. Percentages
- c. Speed, Distance & Time
- d. Converting Numbers

93. Checking Results

- a. Repeating Addition in Different Order
- b. Check with Inverse Sum
- c. Repeating Multiplication in Different Order
- d. Checking Through Approximating
- e. Checking Answers Using a Calculator

3. MATHEMATICAL PROBLEMS & PUZZLES

94. Making Decisions

- a. Choosing Appropriate Number Operations for Addition & Subtraction Problems
- b. Choosing Appropriate Number Operations for Multiplication & Division Problems
- c. Choosing Appropriate Number Operations Using a Calculator

95. Reasoning About Numbers & Shapes

- a. Experimenting with Mathematical Statements
- b. Solving Mathematics Problems & Puzzles
- c. Explaining Methods and Reasoning Orally
- d. Expressing Numbers in a Formula

96. Solving Real Life Mathematical Problems

- a. Mathematical Problems Involving Additions
- b. Mathematical Problems Involving Subtractions
- c. Mathematical Problems Involving Multiplying
- d. Mathematical Problems Involving Sharing
- e. Mathematical Problems Involving Shapes
- f. Mathematical Problems Involving Distance
- g. Mathematical Problems Involving Money
 - i. Transactions
 - ii. Accounts
- h. Mathematical Problems Involving Time
- i. Mathematical Problems Involving Conversions
- j. Mathematical Problems Involving Percentage
- k. Mathematical Problems Involving Averages
- l. Mathematical Problems Involving Speed, Distance & Time
- m. Stories with Mathematical Problems

4. MEASUREMENTS

97. Understanding the Vocabulary of Measurements

- a. Angles
- b. Perimeter
- c. Mass
- d. Capacity

98. Using Measurement Equipment

- a. Using Rulers
- b. Using Protractors
- c. Using Scales

99. Using Standard Unit Measurement Formulas & Symbols

- a. Centimetres – cm
- b. Metres – m
- c. Millimetres – mm

- d. Kilometres – km
- e. Square Centimetres – cm²
- f. Square Metres – m²
- g. Inches
- h. Feet
- i. Yards
- j. Miles
- k. Grams – g
- l. Kilograms – kg
- m. Millilitres – ml
- n. Litres – l
- o. Pints
- p. Gallons
- q. Conversions
 - i. Converting Larger to Smaller Units
 - ii. Converting Smaller to Larger Units
 - iii. Converting Metric into Imperial
 - iv. Converting Imperial into Metric

5. GEOMETRY

100. 2-D Shapes

- a. Irregular Shapes
 - i. Properties & Features
 - ii. Real Life Examples
 - iii. Angles

101. 3-D Shapes

- a. Pyramids
 - i. Properties & Features
 - ii. Real Life Examples
 - iii. Making Shape
 - iv. Drawing Shape
- b. Prisms
 - i. Properties & Features
 - ii. Real Life Examples
 - iii. Making Shape
 - iv. Drawing Shape

102. Space

- a. Grids
 - i. Rows & Columns
 - ii. Co-ordinates

103. Symmetry

- a. Reflection
- b. Symmetrical Patterns
- c. Repeating Patterns
- d. Rotating Patterns
 - i. Turns – Whole, Half, Quarter etc...
 - ii. Clockwise
 - iii. Anti-clockwise
 - iv. Rotating at Different Degrees
- e. Line Symmetry
- f. Axes of Symmetry

6. DATA / STATISTICS

104. Understanding Data

- a. Use & Misuse of Data
- b. Classification
- c. Organisation
- d. Interpretation
- e. Accuracy
- f. Probability
- g. Uncertainty
- h. Mode
- i. Range
- j. Median
- k. Mean

105. Organising Data

- a. Lists
- b. Tables
- c. Diagrams
 - i. Pictograms
 - ii. Venn Diagrams
 - iii. Carroll Diagrams
- d. Graphs
 - i. Block Graphs
 - ii. Line Graphs
- e. Charts
- f. Bar Charts
 - i. Bar Line Charts
 - ii. Pie Charts
- g. Databases
- h. Organising Data on a Computer

Summer Term

1. NUMBERS & NUMBER SYSTEMS

106. Counting & Number Sequences

- a. Square Numbers

107. Place Value

- a. Number Lines
- b. Positive & Negative Whole Numbers
- c. Ratio & Proportion

108. Estimating & Rounding

- a. Multiplication
- b. Division

109. Mathematical Symbols

- a. Advanced Mathematical Symbols

2. CALCULATIONS

110. Addition

- a. Mental Addition Strategies
- b. Two & More Digit Addition
- c. Addition with Carrying
- d. Combined Addition & Subtraction
- e. Other Partition Sums
- f. Decimal Bonds to 1.0
- g. Addition with Whole Numbers plus Decimals
- h. Adding Cash Amounts
- i. Adding Decimal Numbers
- j. Adding Fractions
- k. Adding Whole Numbers with Fractions

111. Subtraction

- a. Mental Subtraction Strategies
- b. Two or More Digit Subtraction
- c. Subtraction with Borrowing
- d. Combined Subtraction & Addition

- e. Other Partition Sums
- f. Inverse Decimal Bonds to 1.0
- g. Subtraction with Whole Numbers plus Decimals
- h. Subtracting Cash Amounts
- i. Subtracting Decimal Numbers
- j. Subtracting Fractions
- k. Subtracting Whole Numbers with Fractions

112. Multiplication

- a. Doubling Numbers
- b. The Times Tables to 12 x
- c. Times Tables Patterns & Strategies
- d. Square Numbers
- e. Long Multiplication
- f. Using Columns for Multiplication
- g. Partition Sums
- h. Multiplication with Factors
- i. Multiplication with Whole Numbers Plus Decimals
- j. Multiplying Cash Amount
- k. Multiplying Decimals
- l. Multiplying Whole Numbers Plus Fractions
- m. Multiplying Fractions
- n. Multiplication Using a Calculator

113. Division

- a. Long Division
- b. Partition Sums
- c. Division with Factors
- d. Converting Division Remainders into Decimals
- e. Long Division with Decimals Answers
- f. Division with Whole Numbers plus Decimals
- g. Dividing Cash Amount
- h. Dividing Decimals
- i. Dividing Whole Numbers plus Fractions
- j. Dividing Fractions
- k. Division Using a Calculator

114. Combined Calculations

- a. Averages
 - i. Median
 - ii. Mean
- b. Percentages
- c. Speed, Distance & Time
- d. Converting Numbers

115. Checking Results

- a. Repeating Addition in Different Order
- b. Check with Inverse Sum
- c. Repeating Multiplication in Different Order
- d. Checking Through Approximating
- e. Checking Answers Using a Calculator

3. MATHEMATICAL PROBLEMS & PUZZLES

116. Making Decisions

- a. Choosing Appropriate Number Operations for Addition & Subtraction Problems
- b. Choosing Appropriate Number Operations for Multiplication & Division Problems
- c. Choosing Appropriate Number Operations Using a Calculator

117. Reasoning About Numbers & Shapes

- a. Experimenting with Mathematical Statements
- b. Solving Mathematics Problems & Puzzles
- c. Explaining Methods and Reasoning Orally
- d. Expressing Numbers in a Formula

118. Solving Real Life Mathematical Problems

- a. Mathematical Problems Involving Additions
- b. Mathematical Problems Involving Subtractions
- c. Mathematical Problems Involving Multiplying
- d. Mathematical Problems Involving Sharing
- e. Mathematical Problems Involving Shapes
- f. Mathematical Problems Involving Distance
- g. Mathematical Problems Involving Money
 - i. Transactions
 - ii. Accounts
- h. Mathematical Problems Involving Time
- i. Mathematical Problems Involving Conversions
- j. Mathematical Problems Involving Percentage
- k. Mathematical Problems Involving Averages
- l. Mathematical Problems Involving Speed, Distance & Time
- m. Stories with Mathematical Problems

4. MEASUREMENTS

119. Understanding the Vocabulary of Measurements

- a. Angles
- b. Perimeter
- c. Mass
- d. Capacity

120. Using Measurement Equipment

- a. Using Rulers
- b. Using Protractors
- c. Using Scales

121. Using Standard Unit Measurement Formulas & Symbols

- a. Centimetres – cm
- b. Metres – m
- c. Millimetres – mm
- d. Kilometres – km
- e. Square Centimetres – cm²
- f. Square Metres – m²
- g. Inches
- h. Feet
- i. Yards
- j. Miles
- k. Grams – g
- l. Kilograms – kg
- m. Millilitres – ml
- n. Litres – l
- o. Pints
- p. Gallons
- q. Conversions
 - i. Converting Larger to Smaller Units
 - ii. Converting Smaller to Larger Units
 - iii. Converting Metric into Imperial
 - iv. Converting Imperial into Metric

5. GEOMETRY

122. Space

- a. Grids
 - i. Rows & Columns

- ii. Co-ordinates

123. Symmetry

- a. Reflection
- b. Symmetrical Patterns
- c. Repeating Patterns
- d. Rotating Patterns
 - i. Turns – Whole, Half, Quarter etc...
 - ii. Clockwise
 - iii. Anti-clockwise
 - iv. Rotating at Different Degrees
- e. Line Symmetry
- f. Axes of Symmetry

6. DATA / STATISTICS

124. Understanding Data

- a. Classification
- b. Organisation
- c. Interpretation
- d. Accuracy
- e. Probability
- f. Uncertainty
- g. Mode
- h. Range
- i. Median
- j. Mean

125. Organising Data

- a. Lists
- b. Tables
- c. Diagrams
 - i. Pictograms
 - ii. Venn Diagrams
 - iii. Carroll Diagrams
- d. Graphs
 - i. Block Graphs
 - ii. Line Graphs
- e. Charts
- f. Bar Charts
 - i. Bar Line Charts
 - ii. Pie Charts
- g. Databases
- h. Organising Data on a Computer

YEAR 7

All Year

1. NUMBERS & NUMBER SYSTEMS

126. Place Value

- a. Number Lines
- b. Positive & Negative Whole Numbers
- c. Ratio & Proportion

127. Estimating & Rounding

- a. Advanced Mathematical Symbols

2. CALCULATIONS

128. Addition

- a. Addition with Whole Numbers plus Decimals
- b. Adding Cash Amounts
- c. Adding Decimal Numbers
- d. Adding Fractions
- e. Adding Whole Numbers with Fractions

129. Subtraction

- a. Subtraction with Whole Numbers plus Decimals
- b. Subtracting Cash Amounts
- c. Subtracting Decimal Numbers
- d. Subtracting Fractions
- e. Subtracting Whole Numbers with Fractions

130. Multiplication

- a. Long Multiplication
- b. Partition Sums
- c. Multiplication with Factors
- d. Multiplication with Whole Numbers Plus Decimals
- e. Multiplying Cash Amount
- f. Multiplying Decimals
- g. Multiplying Whole Numbers Plus Fractions
- h. Multiplying Fractions
- i. Multiplication Using a Calculator

131. Division

- a. Long Division
- b. Partition Sums
- c. Division with Factors
- d. Converting Division Remainders into Decimals
- e. Long Division with Decimals Answers
- f. Division with Whole Numbers plus Decimals
- g. Dividing Cash Amount
- h. Dividing Decimals
- i. Dividing Whole Numbers plus Fractions
- j. Dividing Fractions
- k. Division Using a Calculator

132. Combined Calculations

- a. Averages
 - i. Mean
- b. Percentages
- c. Speed, Distance & Time
- d. Converting Numbers
- e.

133. Checking Results

- a. Repeating Addition in Different Order
- b. Check with Inverse Sum
- c. Repeating Multiplication in Different Order
- d. Checking Through Approximating
- e. Checking Answers Using a Calculator

3. MATHEMATICAL PROBLEMS & PUZZLES

134. Making Decisions

- a. Choosing Appropriate Number Operations for Addition & Subtraction Problems
- b. Choosing Appropriate Number Operations for Multiplication & Division Problems
- c. Choosing Appropriate Number Operations Using a Calculator

135. Reasoning About Numbers & Shapes

- a. Experimenting with Mathematical Statements
- b. Solving Mathematics Problems & Puzzles
- c. Explaining Methods and Reasoning Orally
- d. Expressing Numbers in a Formula

136. Solving Real Life Mathematical Problems

- a. Mathematical Problems Involving Additions
- b. Mathematical Problems Involving Subtractions
- c. Mathematical Problems Involving Multiplying
- d. Mathematical Problems Involving Sharing
- e. Mathematical Problems Involving Shapes
- f. Mathematical Problems Involving Distance
- g. Mathematical Problems Involving Money
 - i. Transactions
 - ii. Accounts
- h. Mathematical Problems Involving Time
- i. Mathematical Problems Involving Conversions
- j. Mathematical Problems Involving Percentage
- k. Mathematical Problems Involving Averages
- l. Mathematical Problems Involving Speed, Distance & Time
- m. Stories with Mathematical Problems

4. MEASUREMENTS

137. Using Measurement Equipment

- a. Using Rulers
- b. Using Protractors
- c. Using Scales

138. Using Standard Unit Measurement Formulas & Symbols

- a. Centimetres – cm
- b. Metres – m
- c. Millimetres – mm
- d. Kilometres – km
- e. Square Centimetres – cm²
- f. Square Metres – m²
- g. Inches
- h. Feet
- i. Yards
- j. Miles
- k. Grams – g
- l. Kilograms – kg
- m. Millilitres – ml
- n. Litres – l
- o. Pints
- p. Gallons
- q. Conversions
 - i. Converting Larger to Smaller Units

- ii. Converting Smaller to Larger Units
- iii. Converting Metric into Imperial
- iv. Converting Imperial into Metric

5. GEOMETRY

139. Space

- a. Grids
 - i. Rows & Columns
 - ii. Co-ordinates

140. Symmetry

- a. Symmetrical Patterns
- b. Repeating Patterns
- c. Rotating Patterns
 - i. Turns – Whole, Half, Quarter etc...
 - ii. Clockwise
 - iii. Anti-clockwise
 - iv. Rotating at Different Degrees
- d. Line Symmetry
- e. Axes of Symmetry

6. DATA / STATISTICS

141. Understanding Data

- a. Understanding Data & Statistics
- b. Use & Misuse of Data
- c. Classification
- d. Organisation
- e. Interpretation
- f. Accuracy
- g. Probability
- h. Uncertainty
- i. Mode
- j. Range
- k. Median
- l. Mean

142. Organising Data

- a. Tables
- b. Diagrams
 - i. Venn Diagrams

- ii. Carroll Diagrams
- c. Graphs
 - i. Block Graphs
 - ii. Line Graphs
- d. Charts
 - i. Bar Charts
 - ii. Bar Line Charts
 - iii. Pie Charts
- e. Databases
- f. Organising Data on a Computer

143. Algebra

- a. Introduction & Overview
- b. Elementary Algebra
 - i. Number / Symbol System
 - ii. Constants
 - iii. Variables
 - iv. Polynomials
 - v. Mathematical Expressions
 - vi. Equations
- c. Using Algebra
 - i. Mathematical Operations
 - ii. Geometry
 - iii. Data
 - iv. Charts & Graphs