Meridian Trust

Year 4 – Medium Term Plan

Guidance

- *The Units below* **MUST** *be taught in this order.*
- *Use the* **Meridian calculation policy**.
- *Complete the summative assessments at the times stated on the assessment calendar.*
- *Formally assess the children's understanding continuously to inform* **instant interventions** *and* **adapt** *lessons to meet their needs.*
- *There is* **additional time** *built into the units for teachers to break one lesson into two, add in additional lessons, carry out* **intervention or enrichment lessons** *or do anything else as needed for their class.*
- *Any time left at the end of each term should be used for* **closing the gap** *and giving children the opportunity to* **apply** *their learnt skills to a real-life context, a shop, an estate agent, a car salesroom, a factory, planning a holiday etc. and open-ended investigations.*
- *Lesson starters may be used to consolidate previous learning in all areas, including* **number**, **shape** *and* **measure**. *Initially, these will be used to* **apply skills learnt from Year 3** *until the subject areas are covered in Year 4.*

Subject Knowledge Support

White Rose Schemes of Work - Maths resources for teachers | White Rose Maths

NCETM Subject Knowledge Audits Primary Subject Knowledge Audit | NCETM

Autumn			
Place Value (3-4 weeks)	**Addition and Subtraction (3-4 weeks)**	**Geometry properties of shapes (2-3 weeks)**	**Multiplication and Division (2-3 weeks)**

Meridian Trust

National Curriculum Statements:

- ✓ count in multiples of 6, 7, 9, 25 and 1000
- ✓ find 1000 more or less than a given number
- ✓ count backwards through zero to include negative numbers
- ✓ recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones)
- ✓ order and compare numbers beyond 1000
- ✓ identify, represent and estimate numbers using different representations
- ✓ round any number to the nearest 10, 100 or 1000
- ✓ solve number and practical problems that involve all of the above and with increasingly large positive numbers
- ✓ read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero and place value

Lesson Sequence:

1. L.P: To understand what a number system is.
2. L.P: To partition and recombine numbers. Standard and flexible up to 3 digits.
3. L.P: To represent numbers. up to 4 digits.
4. L.P: To partition and recombine numbers. Standard.
5. L.P: To partition and recombine numbers. Standard and flexible up to 4 digits.
6. L.P: To compare numbers up top 10,000.
7. L.P: To order numbers up to 10,000.

Explore - Ordering Journeys (maths.org)

8. L.P: To interpret a numberline. up to 3 digits.
9. L.P: To interpret a numberline. up to 4 digits.

National Curriculum Statements:

- ✓ add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate
- ✓ estimate and use inverse operations to check answers to a calculation
- ✓ solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why.

Lesson Sequence:

1. L.P: To solve an addition problem. Reach 100 (maths.org)
2. L.P: To add using the compact method. (practical lesson in mixed attainment partners on A3 or sugar paper) up to 3 digits.
3. L.P: To add using the compact method. up to 3 digits.
4. L.P: To add using the compact method. up to 4 digits with 100s to 1000 exchange only.
5. L.P: To add using the compact method. (practical lesson in mixed attainment partners on A3 or sugar paper) up to 4 digits with multiple exchanges.
6. L.P: To add using the compact method. up to 4 digits with multiple exchanges.
7. L.P: To adjust when adding.
8. L.P: To add using the most efficient method.

National Curriculum Statements:

- ✓ compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes
- ✓ identify acute and obtuse angles and compare and order angles up to two right angles by size
- ✓ identify lines of symmetry in 2-D shapes presented in different orientations
- ✓ complete a simple symmetric figure with respect to a specific line of symmetry.

Lesson Sequence:

1. L.P: To identify, name and order angles.
2. L.P: To identify regular and irregular shapes.
3. L.P: To identify lines of symmetry.

Explore - Let Us Reflect (maths.org)

4. L.P: To complete a symmetrical figure.

National Curriculum Statements:

- ✓ recall multiplication and division facts for multiplication tables up to 12 × 12
- ✓ use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers
- ✓ recognise and use factor pairs and commutativity in mental calculations
- ✓ solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects.

Lesson Sequence:

1. L.P: To explore multiplication.
2. L.P: To understand commutativity.
3. L.P: To use the Distributive Law.
4. L.P: To explore division.
5. L.P: To multiply and divide by 3.
6. L.P: To multiply and divide by 6.
7. L.P: To multiply and divide by 9.
8. L.P: To multiply and divide by 3, 6 and 9.

Starter - Multiplication Square Jigsaw (maths.org)

9. L.P: To multiply and divide by 7.
10. L.P: To find all possibilities. Zios and Zepts (maths.org)
11. L.P: To multiply and divide by 11.
12. L.P: To multiply and divide by 12.
13. L.P: To use the Associative Law.

Meridian Trust

10. L.P: To add and subtract 10, 100 and 1,0000. Explore - What Distance? (maths.org) DC - The Deca Tree Poster (maths.org) 11. L.P: To round to the nearest 10. Explore - Reasoned Rounding (maths.org) 12. L.P: To round to the nearest 100. 13. L.P: To round to the nearest 1000. 14. L.P: To apply rounding skills. 15. L.P: To read Roman Numerals. 16. L.P: To understand negative numbers. Use starters and opportune times to look at patterns and rehearse counting in multiples of 6, 7, 9, 25 and 1000.	9. L.P: To solve an addition and subtraction problem. Maze 100 (maths.org). 10. L.P: To subtract using the compact method. (practical lesson in mixed attainment partners on A3 or sugar paper) up to 3 digits. 11. L.P: To subtract using the compact method. up to 3 digits. 12. L.P: To subtract using the compact method. up to 4 digits with 1000 to 100s exchange only. 13. L.P: To subtract using the compact method. (practical lesson in mixed attainment partners on A3 or sugar paper) up to 4 digits with multiple exchanges. 14. L.P: To subtract using the compact method. up to 4 digits with multiple exchanges. 15. L.P: To subtract using adjusting (3 digit). 16. L.P: To subtract using adjusting (4 digit). 17. L.P: To subtract using the most efficient method. 18. L.P: To use the inverse operation. 19. L.P: To use the inverse operation.	5. L.P: To identify types of triangles. 6. L.P: To sort triangles. 7. L.P: To identify types of quadrilaterals. Explore - Stringy Quads (maths.org) 8. L.P: To sort quadrilaterals. Explore - Quad Match (maths.org)	14. L.P: To apply multiplication knowledge. Multiples Grid (maths.org)

Meridian Trust

Meridian Trust

Spring

Multiplication and Division (4-5 weeks)

National Curriculum Statements:

- ✓ recall multiplication and division facts for multiplication tables up to 12 × 12
- ✓ use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers
- ✓ recognise and use factor pairs and commutativity in mental calculations
- ✓ multiply two-digit and three-digit numbers by a one-digit number using formal written layout
- ✓ solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects.

Carrying Cards (maths.org)

Lesson sequences:

1. LP: To identify factor pairs.
2. LP: To multiply by 1 and 0.
3. LP: To multiply by 10.
4. LP: To multiply by 100.
5. LP: To multiply by 10 and 100.
6. LP: To divide by 10.
7. LP: To divide by 100.
8. LP: To divide by 10 and 100.
9. L.P: To multiply multiples of 10.
10. L.P: To multiply multiples of 100.
11. LP: To use short multiplication. (2-digit by 1)
12. LP: To use short multiplication. (2-digit by 1)

Measurement - Area and Perimeter (2-3 weeks)

National Curriculum Statements:

- ✓ measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres
- ✓ find the area of rectilinear shapes by counting squares

Lesson sequences:

1. LP: To understand area. (Practical lesson)
2. LP: To calculate the area. (Counting squares)
3. LP: To make shapes.
4. LP: To compare areas.
5. LP: To understand perimeter. (Practical lesson)
6. LP: To calculate the perimeter on a grid.
7. LP: To calculate the perimeter of a rectangle.
8. LP: To calculate the perimeter of a rectilinear shape. (Start on grid before moving on)
9. LP: To find the missing lengths in rectilinear shapes.
10. LP: To calculate the perimeter of regular polygons.

Fractions (3-4 weeks)

National Curriculum Statements:

- ✓ recognise and show, using diagrams, families of common equivalent fractions
- ✓ count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten.
- ✓ solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number
- ✓ add and subtract fractions with the same denominator
- ✓ solve simple measure and money problems involving fractions and decimals to two decimal places.

Lesson sequences:

1. LP: To explore fractions. (Practical lesson)
2. LP: To recap prior learning. (Understanding equal parts and parts of a fraction)
3. LP: To find fractions of an amount.
4. LP: To find non-unit fractions of an amount.
5. LP: To consolidate finding fractions of an amount.
6. LP: To recognise equivalent fractions. (Fraction walls)
7. LP: To recognise equivalent fraction families. (Number Lines)
8. LP: To compare and order fractions.
9. LP: To count beyond a whole.
10. LP: To understand improper fractions.
11. LP: To convert improper fractions to mixed numbers.
12. LP: To add and subtract fractions within 1.
13. LP: To add fractions beyond 1.
14. LP: To subtract fraction from a whole.
15. LP: To subtract fractions beyond 1.
16. LP: To apply knowledge of fractions. (Problem solving- could be an NRICH task)
17. Opportunity to revisit any misconceptions.

13. LP: To use short multiplication. (3-digit by 1) 14. LP: To use short multiplication. (3-digit by 1) 15. L.P: To use short multiplication (intervention lesson). 16. To use the most efficient method to multiply 17. LP: To divide a 2-digit by 1-digit. Short Division no exchange 18. LP: To divide a 3-digit by 1-digit. No exchange – layout focus 19. LP: To divide a 3-digit by 1-digit. Exchange 1 for 10 only. 20. LP: To divide a 3-digit by 1-digit. 21. LP: To divide a 3-digit by 1-digit. 22. LP: To divide a 3-digit by 1-digit. Intervention lesson. 23. L.P: To use the most efficient method to multiply and divide. 24. L.P: To solve multiplication and division word problems. 25. L.P: To solve correspondence problems.		18. Opportunity to revisit any misconceptions. 19. Opportunity to revisit any misconceptions.

Meridian Trust

Summer				
Decimals (1 – 2 Weeks) Up to 10 lessons	**Measure – Money, Length Mass and Capacity (2-3 weeks)** Up to 15 lessons	**Measure – Time (1-2 weeks)** Up to 10 lessons	**Statistics (1 – 2 Weeks)** Up to 5 lessons	**Geometry (Position and direction) (1-2 weeks)** Up to 5 lessons

Meridian Trust

National Curriculum Statements: ✓ count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten. ✓ round decimals with one decimal place to the nearest whole number ✓ compare numbers with the same number of decimal places up to two decimal place. ✓ recognise and write decimal equivalents of any number of tenths or hundredths ✓ recognise and write decimal equivalents to $\frac{1}{2}$,$\frac{1}{4}$, $\frac{3}{4}$. 1. LP: To understand a whole (tenths) 2. LP: To understand a whole (hundredths) 3. To recognise and write decimals equivalent to $\frac{1}{2}$,$\frac{1}{4}$, $\frac{3}{4}$. 4. LP: To partition (decimals) 5. LP: To flexibly partition (decimals) 6. LP: To compare decimals 7. LP: To order decimals 8. LP: To round whole numbers (recap)	**National Curriculum Statements:** ✓ estimate, compare and calculate different measures, including money in pounds and pence. ✓ Convert between different units of measure [for example, kilometre to metre; hour to minute] ✓ estimate, compare and calculate different measures, including money in pounds and pence. 1. LP:To explore money (practical) 2. LP: To estimate with money 3. LP: To convert between pounds and pence 4. LP: To compare money (value/ amount) 5. LP: To calculate money (1 step problem) 6. LP: To solve problems (2 step problems) 7. LP: To multiply and divide by 10 and 100 (recap)	**National Curriculum Statements:** ✓ read, write and convert time between analogue and digital 12- and 24-hour clocks ✓ solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days. 1. LP: To understand years months weeks and days 2. LP: To understand days hours minutes and seconds 3. LP: To read the time using analogue clocks (minutes past) 4. LP To understand am and pm (using 24 hr clock) 5. LP: To read the time using	**National Curriculum Statements:** ✓ interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs. ✓ solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs. 1. LP: To interpret charts (bar, pictograms) 2. LP: To draw charts 3. LP: To solve problems using data (sum and difference focus) 4. LP: To interpret line graphs 5. LP: To draw line graphs	**National Curriculum Statements:** ✓ describe positions on a 2-D grid as coordinates in the first quadrant ✓ describe movements between positions as translations of a given unit to the left/right and up/down ✓ plot specified points and draw sides to complete a given polygon. 1. LP: To describe position on a grid (optional practical lesson outside / tape on table) 2. LP: To describe position using co-ordinates 3. LP: To plot co-ordinates 4. LP: To draw 2-D shapes on a grid 5. LP: To translate points on a grid 6. LP: To translate shapes on a grid

9. LP: To round decimals to the nearest whole number ** Include problem solving and reasoning questions with money	8. LP: To convert length (mm to cm) 9. LP: To convert length (cm to m) 10. LP: to compare lengths (mm, cm, m) 11. LP: To understand different units of measure (practical – capacity / weight / length different station) 12. LP: To estimate measure (length and weight) 13. LP: To convert measures (teacher note: focus on conversions into 1000 units of measure - litre, kg km) 14. LP: To calculate measure (teacher note: focus questions on weight and length)	minutes to and minutes past 6. LP: To solve word problems ** reasoning and problem solving should include opportunities for conversion – see PP folder on time		