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Year 3 – 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 Key Stage 1** *until the subject areas are covered in Year 3.*

Subject Knowledge Support

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

NCETM Subject Knowledge Audits Primary Subject Knowledge Audit | NCETM

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Autumn		
Place Value (3-4 weeks)	**Addition and Subtraction (4-5 weeks)**	**Multiplication and Division (3-4 weeks)**
National Curriculum Statements: ✓ count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number ✓ recognise the place value of each digit in a three-digit number (hundreds, tens, ones) ✓ compare and order numbers up to 1000 ✓ identify, represent and estimate numbers using different representations ✓ read and write numbers up to 1000 in numerals and in words ✓ solve number problems and practical problems involving these ideas. **Lesson Sequence** 1. To understand the base 10 system (2-digits) 2. To partition 2-digit numbers (standard and non standard) 3. To position 2-digit numbers on a number line 4. To represent 3-digit numbers. 5. To read and write numbers up to 1000. 6. To understand the base 10 system (3-digits) 7. To partition 3-digit numbers. (standard and non standard) 8. To compare 3-digit numbers. 9. To compare and order 3-digit numbers. 10. To position up to 3-digit numbers on a number line. 11. To estimate the position of 3 digit numbers on a number line. 12. To count up and down in multiples of 50 and 100. 13. To find 1, 10 and 100 more 14. To find 1, 10, and 100 less 15. To use trial and error to solve a problem. Magic Vs (maths.org)	**National Curriculum Statements:** ✓ add and subtract numbers mentally, including: ✓ a three-digit number and ones ✓ a three-digit number and tens ✓ a three-digit number and hundreds ✓ add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction ✓ estimate the answer to a calculation and use inverse operations to check answers ✓ solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction. **Lesson Sequence** 1. To add and subtract within 20 mentally. DC Build it Up (maths.org) 2. To understand commutativity 3. To understand addition is the inverse of subtraction. (Use numbers within 20) 4. To add and subtract 1s (no exchange, mental) 5. To add and subtract 10s (no exchange, mental) 6. To add and subtract 100s (no exchange, mental) 7. To add and subtract 1s 10s and 100s 8. To add ones across a 10 9. To add 10s across a 100 10. To subtract 1s across a 10 11. To subtract 10s across a 100 12. To make connections (exchanging) 13. To use adjusting to add 14. To add numbers with up to 3-digits. (no exchange, written) 15. To add 2-digit numbers exchanging 1s 16. To add numbers with up to 3 digits exchanging 10s	**National Curriculum Statements:** ✓ recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables ✓ solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects. **Lesson Sequence** 1. To understand arrays 2. To understand that multiplication is commutative 3. To understand that multiplication is repeated addition 4. To understand division as sharing or grouping 5. To identify fact families 6. To use trial and error. Make 37 (maths.org) 7. To multiply and divide by 5 and 10 8. To multiply and divide by 2 9. To multiply by 4. 10. To divide by 4 11. To mentally recall 4 times table facts 12. To multiply by 8 13. To divide by 8 14. To mentally recall 8 times table facts 15. To explore the links between 2s, 4s, 8s 16. To multiply by 3 17. To divide by 3 18. To mentally recall 3 times table facts 19. To find factors. 20. To solve a problem using clues. A Mixed-up Clock (maths.org)

Build in opportunities to count up in 4s and 8s in starters and in additional fluency time.	17. To add using the most efficient method. 18. To solve an addition problem. Super Shapes (maths.org) or Finding Fifteen (maths.org) 19. To use adjusting to subtract 20. To subtract two numbers (no exchange, written) 21. To subtract two numbers across a 10 22. To subtract two numbers across a 100 23. To use the most efficient method to subtract 24. To estimate answers using rounding 25. To answer addition and subtraction word problems.	

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Spring

Multiplication and Division (3-4 weeks)

National Curriculum Statements:

- ✓ write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods
- ✓ solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects.

Lesson sequence:

1. Multiplying by 10 – practical with HTOs columns
2. Multiply by 10 – written skills
3. Multiply 2 digits by 1 digit – no exchange – practical
4. Multiply 2 digits by 1 digit – no exchange – written
5. Multiply 2 digits by 1 digit – with exchange – practical
6. Multiply 2 digits by 1 digit – with exchange – written
7. Link between multiplication and division
8. Divide 2 digit by 1 digit – no exchange – practical

Fractions 1 (2-3 weeks)

National Curriculum Statements:

- ✓ recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators
- ✓ compare and order unit fractions, and fractions with the same denominators.

Lesson sequence:

1. Understanding parts and whole
2. Equal and unequal parts
3. Recap half, quarters and thirds – practical
4. Recap half, quarters and thirds – formal
5. Understanding denominators of unit fraction
6. Compare and order unit fractions – practical

Money (1 – 2 Weeks)

National Curriculum Statements:

- ✓ add and subtract amounts of money to give change, using both £ and p in practical contexts

Lesson sequence:

1. Recognizing coins and their value – consolidation lesson
2. Convert pounds and pence (without decimals) practical lesson linked to division
3. Add money
4. Subtract money
5. Find change

Buying a Balloon (maths.org)

Length and Perimeter (2-3 Weeks)

National Curriculum Statements:

- ✓ measure, compare, add and subtract: lengths (m/cm/mm);
- ✓ measure the perimeter of simple 2-D shapes

Lesson sequence:

1. Recap of measuring in m and cm – practical outside?
2. Measure in mm
3. Measure in cm and mm
4. Comparison of m, cm and mm – identify appropriate measurement for variety of items (See White Rose Year 3 Spring term Block 2 Step 4)
5. Equivalent m and cm
6. Equivalent mm and cm
7. Compare lengths (See White Rose Year 3 Spring term Block 2 Step 7)
8. Add lengths
9. Subtract lengths
10. What is perimeter?
11. Measure perimeter
12. Calculate perimeter

Fractions 2 (2-3 weeks)

National Curriculum Statements:

- ✓ add and subtract fractions with the same denominator within one whole [for example, 7 5 + 7 1 = 7 6]
- ✓ recognise and show, using diagrams, equivalent fractions with small denominators
- ✓ count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10.
- ✓ recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators
- ✓ solve problems that involve all of the above. (all Fractions statements from the NC)

Lesson Sequence

1. To add fractions with the same denominator
2. To subtract fractions with the same denominator
3. To recognise equivalent fractions on a numberline
4. To recognise equivalent fractions using a bar model
5. To find unit fractions of a set of objects
6. To find non unit fractions of a set of objects
7. To find fractions of amounts.
8. To count up and down in tenths

9. Divide 2 digit by 1 digit – no exchange - written 10. Divide 2 digit by 1 digit – flexible partitioning – practical 11. Divide 2 digit by 1 digit – flexible partitioning – practical 12. Divide 2 digit by 1 digit – flexible partitioning – written 13. Divide 2 digit by 1 digit – remainders 14. Scaling problems 15. Correspondence problems	7. Compare and order unit fractions – written 8. Understand the numerators of non-unit fractions 9. Relate unit and non-unit fractions to the whole 10. Compare and order non-unit fractions			9. To recognise that tenths arise from dividing an object into equal parts 10. To divide one-digit numbers or quantities by 10. (consider using conversions cm/mm)

Summer			
Statistics (1 – 2 Weeks)	**Measurement – Time (2 - 3 weeks)**	**Geometry (2-3 weeks)**	**Measurement - Mass and Capacity (2-3 week)**
National Curriculum Statements: ✓ interpret and present data using bar charts, pictograms and tables ✓ solve one-step and two-step questions [for example, 'How many more?' and 'How many fewer?'] using information presented in scaled bar charts and pictograms and tables. **Lesson sequence:** 1) Interpret pictograms 2) Make pictograms 3) Interpret bar charts 4) Make bar charts 5) Interpret two-way tables 6) Make two-way tables 7) Collect and represent data – school related project – display? 8) Collect and represent data – school related project – display?	**National Curriculum Statements:** ✓ tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks ✓ estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes and hours; use vocabulary such as o'clock, a.m./p.m., morning, afternoon, noon and midnight ✓ know the number of seconds in a minute and the number of days in each month, year and leap year ✓ compare durations of events [for example to calculate the time taken by particular events or tasks]. **Lesson Sequence** **1. To identify Roman numerals to 12** **2. optional recap lesson: To tell the time to o'clock, half past and quarter past and to** **3 and 4. To tell the time to 5 minutes** **5 and 6. To tell the time to the minute** **7. To read time on a digital clock** **8. To use a.m. and p.m.** **9. To understand the 24 hour clock.** **10. To understand the relationship between years, months, days and hours** **11. To find durations between start and end times** **12. To identify appropriate units of time**	**National Curriculum Statements:** ✓ draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them ✓ recognise angles as a property of shape or a description of a turn ✓ identify right angles, recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn; identify whether angles are greater than or less than a right angle ✓ identify horizontal and vertical lines and pairs of perpendicular and parallel lines. Lesson Sequence 1. To understand the relationship between turns and angles 2. To identify right angles 3. To compare angles 4. To measure and draw lines accurately 5. To recognise and draw horizontal and vertical lines 6. To identify parallel and perpendicular lines 7. To recognise and describe 2-D shapes 8. To draw polygons 9. To recognise and describe 3-D shapes 10. To make 3-D shapes	**National Curriculum Statements:** ✓ measure, compare, add and subtract: mass (kg/g); volume/capacity (l/ml) Lesson Sequence 1. To explore number scales 2. To measure mass in grams 3. To measure mass in kilograms and grams 4. To recognise 1 kg is equivalent to 1000 grams 5. To compare masses of different objects using grams and kilograms 6. To add and subtract mass 7. To measure capacity and volume in millilitres 8. To measure capacity and volume in litres and millilitres 9. To calculate using up to 1000 millilitres (1litre) (wrm spring step 9) 10. To compare capacity and volume 11. To add and subtract capacity and volume

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