# Year 3            Spring Term

| Weeks | Key knowledge | Previous experience (NCETM Guidance) Support gaps in learning | Curriculum statement | NCETM links to PD materials to support subject knowledge and small steps Cross-curricular links |
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| Weeks 1-2 | **Measurement: length**<br>Estimate and measure mass, volume and length.<br>Understand how to convert units of measure from larger to smaller and vice versa.<br>Link measuring length to perimeter using centimetres and millimetres.<br>Practical context.<br>Accurately read the mass from the scale.<br>Be aware of misconceptions.<br>Identify the value of the markings on the scale.<br>Read the scales.<br>Know the relative values of centimetres and metres.<br>Convert between centimetres and metres.<br>Visualise length using part of a ruler/height chart<br>Apply their understanding of fractions and decimals to metres and centimetres.<br>Identify the length represented by each interval on the scale.<br>Know that 10 cm = 0.1 m.<br>Know that 1 cm = 0.01 m.<br>Understand centimetres as a fraction of a metre.<br>Measure height in metres using a | Can use and read a ruler, scales etc<br><br>Understands what 0 means on a ruler, scales etc<br><br>Estimate how long lines are by comparing them to the 100cm lines<br><br>Read scales in division of ones, two's fives and tens (EXP)<br><br>Understanding that there are 100cm in 1 metre<br><br>Knowing the mass is measurement in kg and grams<br><br>Knowing the capacity is measurement in ml and litres | Measure, compare, add and subtract lengths (m/cm/mm);<br><br>Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm) to the nearest appropriate unit, using rulers.<br><br>Solve problems involving addition, subtraction, multiplication and division.<br><br>Compare and order lengths.<br><br>Solve problems, including missing number problems, involving division. | Link with DT - making bags – measuring parts of the bag in mm and cm. include measurements in analysis of bag, and in design of own bag.<br><br>Link with Science – friction investigation – measure the distance up the ramp to the point at which the car will start.<br><br>Measure (in cm/m) the distance travelled by the car, beyond the end of the ramp.<br><br>3:3 TP all TPs identifying, representing and comparing fractions. |

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| | measuring tape.<br>Write height in metres as a decimal.<br>Write height in metres as a mixed number | | | |
| Week 3-5 | **Money**<br>Count and record in pounds and pence.<br>Count amounts of money to find the total. Write money in pounds using decimal notation<br>Make links between tenths and hundredths and decimal notation for money.<br>Compare amounts of money by looking at significant digits and by converting amounts from pounds to pence and vice versa.<br>Round money to the nearest pound and understand contexts in which this would be a useful skill to know.<br>Estimate amounts and totals.<br>Apply these skills to problem-solving situations, finding totals and calculating change.<br>Visualise a money problem using a bar model and begin to explore unequal sharing in the context of money.<br>Know the relative values of different coins.<br>Know that 10 × 10p = £1.00.<br>Understand the equivalence between 10p and £0.1.<br>Record multiples of 10p as a fraction. | Count in multiples of 2, 5 and 10.<br><br>Understand unitising: eg unitise in tens: understand that 10 can be thought of as a single unit of 1 ten.<br><br>Understand the £ and p symbol<br><br>Finding equivalent amounts<br><br>Use different coins to make the same amount | To calculate amounts of money<br><br>Calculate different measures, including money in pounds and pence<br><br>Estimate, compare and calculate different measures, including money in pounds and pence.<br><br>Add and subtract amounts of money to give change, using both pounds and pence in practical contexts | Read NCETM guidance 2.1 counting, unitising and coins to support subject knowledge.<br><br>Powermaths/ MNP and WR to support planning. |

| Weeks 6-11 | **Fractions: comparing and ordering and fractions as numbers (refer to fractions policy)** Understand the denominator as equal parts and the numerator as how many equals parts numerator Understanding the whole and parts **3:1 TP 1/2/3/4** Variety of models used to understand the structure of fractions Developing understanding or denominator e.g the bigger the denominator the smaller the fraction **3:3 TP 7/8** Relate fractions to division | Reason about the location of whole numbers in the linear number system.<br><br>Understand whole and parts<br><br>Can write the fraction notion correctly.<br><br>Can recognise, find, name and write fractions 1/3, 1/4, 2/4 and ¾ of a length, shape, set of objects or quantity.<br><br>Knows that fractions of amounts can be calculated using multiplication and division facts such as finding 1/2 or ¼ and can use array jottings to support their understanding.<br><br>Have some understanding of equivalence eg ½ = 2/4 | 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. Recognise and use fractions as numbers: unit fractions (numerator of 1) and non-unit fractions with small denominators. Recognise and show, using diagrams, equivalent fractions with small denominators. Add and subtract fractions with the same denominator within one whole [for example, 5/7 + 1/7 = 6/7]. Compare and order unit fractions, and fractions with the same denominators. Solve problems that involve all of the above. | 3:1 TP 1/2/3/4 (Understanding of fractions – preparing for later fractions work- part/whole relationship) 3:2 TP 1-6 identifying, representing and comparing fractions – unit fractions<br><br>3:3 TP 1 / 2  introducing non-unit fractions 3:3 TP 3 understanding of what makes a whole 3:3 TP 4/5/6 (Fractions as numbers)<br><br>3:4 TP 1/2/3/4<br><br>3:3 TP 7/8 |

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| Week 12 | **Number, calculation and arithmetic:**<br><br>Compliments to 100 (eg 20 + 80 = 100, 67 + 33 = 100) and all 2-digits numbers within 100<br><br>Application of appropriate mental strategies when the numbers are easy to manipulate 58 + 22 = 60 + 20<br><br>Check the reasonableness of the answer<br><br>Understanding the columns<br><br>Understanding the process of where to start and how to track through the written method<br><br>Apply tables knowledge in the context of place value<br><br>eg 6 x 7 = 42 and 60 x 7 etc<br><br>Understanding the relationships between the multiplication and division statements eg 6 x 7 = 42, 7 x 6 = 42 and 42 ÷ 7 = 6<br><br>Facts and mental to written methods<br><br>Mental strategies for partitioning for multiplication ( 96 x 6 could be 90 x 6 and 6 x 6)<br><br>Mental strategies for rearranging for division ( 96 ÷ 6 could be partitioned into 60 ÷ 6 and 36 ÷6 ) distributive law<br><br>Understanding multiplication as commutative<br><br>Appropriate methods for addition, subtraction, multiplication and division stage in the year<br><br>Short division method backed up by | Refer to Autumn term's learning on calculation as this concept is now being revisited.<br><br>Calculate complements to 100.<br>Add and subtract up to three-digit numbers using columnar methods.<br><br><br>Manipulate the additive relationship:<br>Understand the inverse relationship between addition and subtraction, and how both relate to the part–part–whole structure.<br>Understand and use the commutative property of addition, and understand the related property for subtraction.<br><br>Short methods for multiplication and division<br><br>Apply known multiplication and division facts to solve contextual problems with different structures, including quotitive and partitive division. | To add and subtract numbers mentally.<br>To estimate the answer to a calculation and use inverse operations to check answers<br>To add and subtract numbers using columnar methods<br>To estimate the answer to a calculation and use inverse operations to check answers<br>To solve addition and subtraction problems<br>To recall and use multiplication and division facts<br>To write and calculate mathematical statements for multiplication and division, using facts and place value<br>To recognise and use commutativity in mental calculations<br>To use a formal written method for multiplication and division.<br>To recognise and use commutativity in mental calculations<br>To understand the effect of dividing a one- or two- digit number by 10 and 100<br>To solve problems, including missing number problems, involving multiplication and division | See Autumn Term MTP for **specific** links to PD materials for calculation.<br>1.17 – 1.21 Addition and Subtraction (1.20 and 1.21 Formal methods)<br><br>Y4 2.14 and 2.15 for written methods for multiplication and division |

| | models and images (refer to calculation on policy | | | |
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