| Autumn 1 | Week 1 | Week 2 | Week 3 | Week 4 | Week 5 | Week 6 | Week 7 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Counting <br> Count from 0 in multiples 50 and 100 . <br> Review counting in $5 s$ and 10s. Discuss how multiples of 5, 10, 50 and 100 end in 0 or 5. Use counting sticks, hundred square and/or gattegno charts. | Partitioning <br> Partition numbers up to 1000 in as many different ways as possible. $\begin{aligned} & 56=50+6,25+25+6 \\ & 50+3+3 \ldots \end{aligned}$ <br> Progress to apply the above skill to 3 digit numbers. | Adding mentally <br> Use number bonds to add mentally. $\begin{aligned} & 13+7=? 3+7=10 \text { so } 10+ \\ & 10=20 \\ & 23+7=3+7=10 \text {, so } 10+20 \\ & =30 \ldots \end{aligned}$ <br> Progress to apply the above skill to 3 digit numbers. | Subtracting mentally <br> Use number line to add on to subtract. Adding up to nearest tens. $87-25=$ <br> 25 $\qquad$ 87 <br> Progress to apply the above skill to 3 digit numbers. | Adjust to subtract mentally (-9 and - $\mathbf{1 1}$ to start with). $37-9=28$ <br> (Adjust 9 by adding one to it to make $10,37-10=27$, then adjust the answer by adding $1,27+1=28$ ) Apply the same with -11, but encourage children to partition 11 into $10+1$, take 10 away first, then take 1 away. <br> Progress to apply the above skill to 3 digit numbers. | Counting <br> Count from 0 in multiples of 4 . <br> Review counting in multiples of 2 and discuss the links - double 2 is 4. All multiples of 2 and 4 are even. Use counting sticks and hundred squares. | $\begin{aligned} & \text { hinvestigations and puzzles. Use } \\ & \text { essment as the children apply their } \end{aligned}$ |
|  | Place Value <br> Place value of numbers up to three digits. <br> Read and write numbers up to 1000 in numerals and words. | Place Value <br> Compare and order numbers to 1000 . <br> Find 10 or 100 more or less than a given number. | Addition <br> Add and subtract numbers mentally, including: a threedigit number and ones, a threedigit number and tens, a threedigit number and hundreds | Subtraction <br> Subtract numbers mentally, including: digit number and tens, a three-digit nu | three-digit number and ones, a threeer and hundreds | 2D Shape <br> Identify right angles and recognise angles as a property of shape. Draw 2D shapes (use of dotted paper recommended). |  |
|  | Identify, represent and estimate numbers using different representations. | Solve number problems and practical problems involving these ideas. | Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction. <br> Estimate answer to a calculation and use the inverse operations to check answers. | Solve problems, including missing num place value, and more complex addition <br> Estimate answer to a calculation and us answers. | er problems, using number facts, and subtraction. <br> the inverse operations to check | Describe the properties of 2-D shapes using accurate language. <br> Identify angles greater or lesser than a right angle. |  |
| $\begin{aligned} & \mathscr{0} \\ & \frac{0}{\pi} \\ & x \end{aligned}$ | TTRS (x2,5,10 then 3,4,8) Counting sticks <br> End of year target: recall multiplication and division facts for the 2, 5, 10, 3, 4 and 8 times tables. | TTRS (x2,5,10 then 3,4,8) Counting sticks | TTRS (x2,5,10 then 3,4,8) Counting sticks | TTRS (x2,5,10 then 3,4,8) Counting sticks | TTRS (x2,5,10 then 3,4,8) Counting sticks | TTRS (x2,5,10 then 3,4,8) Counting sticks |  |




| Spring 1 | Week 1 | Week 2 | Week 3 | Week 4 | Week 5 | Week 6 | Week 7 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |


| Number and Place Value | Multiplication and Division | Addition and Subtraction | Fractions/Decimals | Geometry | Statistics | Measures |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |


|  | Counting <br> Count from 0 in multiples of 8. <br> Review counting in multiples of 2 and 4. Discuss the links - double 2 is 4 , double 4 is 8 . All multiples of 2, 4 and 8 are even. Use counting sticks and hundred squares. | Multiples of 5. <br> Count up and down, back and forwards in multiples of 5 . Identify that multiples of 5 end only in digits 0 and/or 5. Use counting sticks and hundred squares. | Compensate to subtract $35-18=?$ <br> Add two to 18 to make 20 (friendly number)... $35-20=15$ <br> Then add 2 back on... $15+2=17$ <br> Progress to apply the above skill to 3 digit numbers. | Review 'Adjusting to Subtract' mentally ( -9 and -11 to start with) from Autumn 1 and develop this skill to subtract by 12 and so on. | Recognising multiples of 4 <br> Multiples of 4 are even so always end with the digits $0,2,4,6$ or 8 . To find the answer to a $x 4$ calculation, double the number twice. $8 \times 4=8 \times 2=16,16 \times 2=32$ |  | Review multiplying and dividing by 10 from Autumn 2 then move on to multiplying and dividing by 100 . |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \text { 音 } \\ & \\ & \sum_{n}^{n} \\ & \sum_{n}^{\pi} \end{aligned}$ | Measures (Length) <br> Measure, compare lengths add and subtract lengths (cm, $m m, m$ ). <br> Measure and compare lengths ( $\mathrm{cm}, \mathrm{mm}, \mathrm{m}$ ) in different contexts (including curved lines, measuring objects and children 's bodies). | Addition <br> Add numbers with up to three digits, using formal written methods of columnar addition. | Subtraction <br> Subtract numbers with up to three columnar subtraction. | s, using formal written methods of | Measures (Money) <br> Add and subtract amounts of money to give change, using both $£$ and $p$ in practical contexts. |  | Statistics <br> Interpret and present data using bar charts, pictograms and tables. |
|  | Solve worded problems applying all of the above. | Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction. <br> Estimate answer to a calculation and use the inverse operations to check answers. | Solve problems, including missing nu place value, and more complex additio <br> Estimate answer to a calculation and answers. | mber problems, using number facts, and subtraction. <br> se the inverse operations to check | Apply the above skills in worded problems. <br> Become fluent in counting and recognising coins by adding and subtracting amounts, including mixed units, Read and say amounts of money confidently and use the symbols $£$ and p accurately, recording pounds and pence separately. Decimal recording of money is introduced formally in year 4. |  | 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. |
| $\begin{aligned} & \frac{0}{0} \\ & \frac{0}{\pi} \\ & x \end{aligned}$ | TTRS (x2,5,10 then 3,4,8) Counting sticks <br> End of year target: recall multiplication and division facts for the 2, 5, 10, 3, 4 and 8 times tables. | TTRS (x2,5,10 then 3,4,8) Counting sticks | TTRS (x2,5,10 then 3,4,8) Counting sticks | TTRS (x2,5,10 then 3,4,8) Counting sticks | TTRS (x2,5,10 then 3,4,8) Counting sticks |  | $\begin{aligned} & \hline \text { TTRS (x2,5,10 then } \\ & 3,4,8) \\ & \text { Counting sticks } \end{aligned}$ |



|  | Double numbers up to 1000 ． | Halving numbers／recall known facts | Dividing by 4. | Roman numerals（Leads on to Time in Summer 1）． |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Double 15．．． | Partition to halve． | Encourage children to halve the number and halve again when dividing by 4 ． | Recognise the value of I－XII |  |  |  |
|  | $10+5$ ：double 10 is 20 ，double 5 is 10 ， so $10+20=30$ ． | Half of $1000=500$ <br> Half of $500=250$ |  |  |  |  |  |
| $\begin{aligned} & \vec{N} \sum \sum \\ & \dot{W} \\ & \tilde{W} \end{aligned}$ | Progress to apply the above skill to 3 digit numbers． | $\begin{aligned} & \text { Half of } 300=150 \\ & \text { Half of } 100=50 \\ & \text { Half of } 50=25 \end{aligned}$ |  |  |  |  |  |
|  |  | Division |  | Fractions |  |  |  |
| $\sum_{i=1}^{n}$ | Revisit＇Write and calculate mathematical statements for multiplication using the multiplication tables that they know（3，4 and 8）， including for TO $\times O$ ，using mental methods from Autumn 2 and progress to formal written methods． | Revisit＇Write and calculate mathematical stater that they know（3， 4 and 8），including for TO $x 0$ progress to formal written methods | ents for division using the multiplication tables using mental methods from Autumn 2 and | Add and subtract fractions with the same denominator within one whole $(5 / 7+1 / 7=6 / 7)$ ． |  |  |  |
|  | Solve problems including missing number problems involving multiplication，including positive interger scaling problems and correspondence problems which n objects are linked to m objects． | Solve problems including missing number problems involving division，including positive interger scaling problems and correspondence problems which n objects are linked to m objects． |  | Continue to recognise fractions in the context of parts of a whole，numbers，measurements，a shape， and unit fractions as a division of a quantity． Practise adding and subtracting fractions with the same denominator through a variety of increasingly complex problems to improve fluency． |  |  |  |
|  | TTRS（x2，5，10 then 3，4，8） Counting sticks End of year target：recall multiplication and division facts for the 2，5，10，3， 4 and 8 times tables． | TTRS（x2，5，10 then 3，4，8） Counting sticks | TTRS（x2，5，10 then 3，4，8） Counting sticks | TTRS（ $\mathrm{x} 2,5,10$ then $3,4,8$ ） Counting sticks |  |  |  |


| Summer 1 | Week 1 | Week 2 | Week 3 | Week 4 | Week 5 | Week 6 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |


|  | Recognising multiples of 3 <br> Any time we multiply by $\mathbf{3}$, the digits in the answer will always add up to a multiple of $\mathbf{3}$. For example: $8 \times 3=24$, the 2 and 4 add up to 6 , which is a multiple of 3 . | Fractions <br> 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. Link $5 / 10$ with $1 / 2$, discuss why they represent the same value. <br> Model and count with counting sticks. | Review multiplying and dividing by 10 from Autumn 2 then move on to multiplying and dividing by 100 . | Multiples of 8 <br> To multiply by 8 , you can double the number 3 times: $8 \times 2=16$ $2 \times 2=4,4 \times 2=8,8 \times 2=16$ | Time <br> Know the number of seconds in a minute, and the number of days in each month, year and leap year. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\sum_{i=1}^{n}$ | 2D Shape - Turns <br> Recognise angles as a property of a shape or a description of a turn. <br> Recognise that two right angles make a half turn, three make three quarters of a turn and 4 right angles make a full turn. | Fractions Recognise and show, using diagrams, equivalent fractions with small denominators. | Measures (Volume/capacity) <br> Measure, compare add and subtract volume/capacity ( $1 / \mathrm{ml}$ ). | Measures (mass) <br> Measure, compare add and subtract mass (kg/g) | Time <br> Tell and write the time from an analogue clock, including using Roman numerals from I to XII. |  |
|  | Identify whether an angle is greater than or less than a right angle. <br> Describe the properties of 2-D and 3-D shapes using accurate language, including lengths of lines and acute and obtuse for angles greater or lesser than a right angle. | Compare and order unit fractions, and fractions with the same denominators. | Use standard units of measurement with increasing accuracy, using their knowledge of the number system. | Use standard units of measurement with increasing accuracy, using their knowledge of the number system. | Compare durations of events (for example to calculate the time taken by particular events or tasks). <br> 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 |  |
| $\begin{aligned} & \mathscr{0} \\ & \stackrel{0}{\pi} \\ & \underset{x}{4} \end{aligned}$ | TTRS (x2,5,10 then 3,4,8) Counting sticks <br> End of year target: recall multiplication and division facts for the 2, 5, 10, 3, 4 and 8 times tables. | TTRS (x2,5,10 then 3,4,8) Counting sticks | TTRS (x2,5,10 then 3,4,8) Counting sticks | TTRS (x2,5,10 then 3,4,8) Counting sticks | TTRS (x2,5,10 then 3,4,8) Counting sticks | $\begin{aligned} & \text { Allow childr } \\ & \text { puzzles. Use } \mathrm{N} \end{aligned}$ |




| Autumn 2 | Week 1 | Week 2 | Week 3 | Week 4 | Week 5 | Week 6 | Week 7 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Counting <br> Count in multiples of 9 . <br> Use counting sticks and hundred squares. | X 10, 100 and 1000 mentally. <br> Children need to understand that the answer increases in multiplication. The Dienes and the 1, 10, 100, 1000 show visually what happens as the digits move left. | Dividing mentally: <br> Use place value, known and derived facts to divide mentally, including: dividing by 1 . <br> Example strategies to teach: | Multiplication and Division <br> Continue to multiply and divide by 10,100 and 1000 mentally in preparation for converting measures later in the year. | Dividing by 4. <br> Encourage children to halve the number and halve again when dividing by 4. Model this by cutting a $2 D$ shape in half, then halving it again to model quarters. |  | Time <br> Know (and convert) the number of seconds in a minute, and the number of days in each month, year and leap year. |
| $\begin{aligned} & \text { 息 } \\ & \sum_{n}^{n} \\ & \sum_{n}^{\pi} \end{aligned}$ | Measures (Area and Perimeter) <br> Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres. <br> Find the area of rectilinear shapes by counting squares. | Multiplication <br> Multiply two-digit and three-digit numbers by a one-digit number using formal written layout. | Use the inverse to divide. <br> 48 divided by $8=$ ? <br> $8 \times 8=48$, so 48 divided by $8=$ <br> 8 . <br> Partition to divide. <br> 48 divided by $3=16$ <br> Partition 48 into 30 and 18: <br> 30 divided by $3=10$ <br> 18 divided by $3=6$ <br> So... $10+6=16$ | Division/Fractions <br> Find the effects of dividing a one or two digit number by 10 and 100 , identifying the value in the digits as ones, tenths and hundredths. <br> Children need to understand that the answer decreases in division. The Dienes alongside the $1,10,100$, 1000 show visually what happens as the digits move left. | Fractions <br> Recognise and show, using diagrams, families of common equivalent fractions. |  | Measures (time) <br> Read, write and convert time between analogue and digital 12 - and 24-hour clocks. <br> Try some fun investigations with Santa and time. What time does he start work? How long does he sleep? |
|  | Inverses: <br> Allow children the opportunity to not only calculate perimeter but to use the perimeter to calculate lengths of sides. | 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. | Apply these skills in different contexts. | Apply these skills in different contexts. | 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. | $\begin{aligned} & \text { Allow children to app } \\ & \text { puzzles. Use NR } \end{aligned}$ | Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days. |
| $\frac{\stackrel{y}{0}}{\frac{0}{\pi}}$ | TTRS <br> Counting Sticks Focus: 3s and 6 s (the relationships between them - the 6 times tables are double the 3 s ) <br> End of year target: recall multiplication and division facts for $x$ tables up to $12 x 12$. | TTRS <br> Counting Sticks Focus: 3 s and 6 s (the relationships between them - the 3 times tables are half of the 6 times tables) | TTRS <br> Counting Sticks Focus: 7s (7 is a or tricks, it is full of odd and eve remember and will come up often - keep on practising!) | prime number so no obvious patterns numbers so it is the hardest to on the MTC, this is a memory game | TTRS <br> Counting Sticks Focus: 9s (mult the ones column is decreases by time until it reaches zero and it to 9 . The tens column increases each time. You can easily tell number is a multiple of 9 by ad digits together. If the sum of the equal 9 , then the number is a $m$ You can always multiply a num then adjust by subtracting, for e a child is stuck with $3 \times 9=$ ?, th multiply 3 by 10 , then subtract 27). | ples of 9 one each oes back by one hether a ing the digits ltiple of 9 . er by 10 ample, if ey can which is | TTRS Counting Sticks Focus: Revisit 7 s from week 3 and 4. |


| Spring 1 | Week 1 | Week 2 | Week 3 | Week 4 | Week 5 | Week 6 | Week 7 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 哥 <br> 空会号 픙苞 | Use knowledge of near doubles to add mentally． <br> $25+26=51(26$ can be partitioned into $25+1$ ，so $25+25=50$ ， $50+1=51)$ <br> $150+152=302(152$ can be partitioned to $150+2$ ，double 150 is $300,300+2=302$ ）． <br> Progress to 4 digit numbers． | Adjust to subtract mentally（ -9 and － $\mathbf{1 1}$ to start with）． $37-9=28$ <br> （Adjust 9 by adding one to it to make $10,37-10=27$ ，then adjust the answer by adding 1，27＋1＝28） Apply the same with -11 ，but encourage children to partition 11 into $10+1$ ，take 10 away first，then take 1 away． <br> Progress to apply the above skill to 3 digit numbers． | Multiplication and Division <br> Continue to multiply and divide by 10， 100 and 1000 mentally． | Counting <br> Count in multiples of 25 and 1000. <br> Make links using shapes to $25=$ $1 / 4$ of 100 and 250 is $1 / 4$ of 1000 ． <br> Use counting sticks and hundred squares． | Number／Fractions <br> Count up and down in hundredths；recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten． <br> Use counting sticks，Dienes，2d shapes．．． |  | Decimals <br> Recognise and write decimal equivalents of any number of tenths or hundredths． |
|  | Addition <br> Add numbers with up to 4 digits using the formal written methods of columnar addition where appropriate． | Subtraction <br> Subtract numbers with up to 4 digits using the formal written methods of columnar subtraction where appropriate． | Measures <br> （Volume／capacity／mass／ length） <br> Convert between different units of measure［for example， kilometre to metre；hour to minute］ | Rounding <br> Round any number to the nearest 10,100 or 1000 ． | Fractions（Decimals） <br> Round decimals with one decimal place to the nearest whole number． |  | Measures（Money）／ Fractions <br> Solve simple measure and money problems involving fractions and decimals to two decimal places． |
|  | Estimate and use inverse operations to check answers to a calculation． <br> Solve addition two－step problems in contexts，deciding which methods to use and why． | Estimate and use inverse operations to check answers to a calculation． <br> Solve subtraction two－step problems in contexts，deciding which methods to use and why． | Estimate，calculate and compare different measures． | Solve number and practical problems involving rounding． | Estimate，compare and calculate different measures，including money in pounds and pence． <br> Convert between pounds and pence． |  | Estimate，compare and calculate different measures，including money in pounds and pence． <br> Convert between pounds and pence． |
| $\frac{\stackrel{y}{0}}{\frac{0}{\pi}}$ | TTRS <br> Counting Sticks Focus：Revisit 9s from Autumn 2 week 5 and 6. <br> End of year target：recall multiplication and division facts for $x$ tables up to 12x12． | TTRS <br> Counting Sticks Focus：11s（to find $8 \times 11$ ，children could multiply by 10 then add 8） | TTRS Counting Sticks Focus： 6 s and 12 s （the relationships between them－the 12 times tables are double of the 6 times tables） | TTRS <br> Counting Sticks Focus：6s and 12s（the relationships between them－the 6 times tables are half of the 12 times tables） | TTRS <br> Counting Sticks Focus：6s and 12s（the relationships between them－the 6 times tables are half of the 12 times tables） |  | TTRS <br> Counting Sticks：12s（all multiples are even，the 0，2，4，6，8，0 pattern repeats through all the $12 x$ tables $(0,1 \underline{2}, 2 \underline{4}$ ， $3 \underline{6}, 4 \underline{8}, 6 \underline{0} \ldots)$ ） |



| Summer 1 | Week 1 | Week 2 | Week 3 | Week 4 | Week 5 | Week 6 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Prepare for MTC - use individual heat map grids to target the children in class. Times tables starters all this half term. | Prepare for MTC - use individual heat map grids to target the children in class. Times tables starters all this half term. | Prepare for MTC - use individual heat map grids to target the children in class. Times tables starters all this half term. | Prepare for MTC - use individual heat map grids to target the children in class. Times tables starters all this half term. |  | Prepare for MTC - use individual heat map grids to target the children in class. Times tables starters all this half term. |
| $\sum_{i=1}^{n}$ | Decimals <br> Round decimals with one decimal place to the nearest whole number. <br> Compare numbers with the same number of decimal places up to two decimal places. | Number (Roman numerals) <br> 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. | Fractions <br> Add and subtract fractions with the same denominator. | Statistics <br> Interpret and present discrete and continuous data using appropriate graphical methods, revisit bar charts and introduce time graphs. |  | Geometry <br> Describe positions on a 2-D grid as coordinates in the first quadrant. <br> Describe movements between positions as translations of a given unit to the left/right and up/down |
|  | Solve simple measure and money problems involving fractions and decimals to two decimal places. | Apply knowledge of Roman numerals in other contexts such as telling the time | 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. | Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs. |  | Plot specified points and draw sides to complete a given polygon. |
|  | Prepare for MTC - use individual heat map grids to target the children in class. <br> Times tables starters all this half term. | Prepare for MTC - use individual heat map grids to target the children in class. Times tables starters all this half term. | Prepare for MTC - use individual heat map grids to target the children in class. Times tables starters all this half term. | Prepare for MTC - use individual heat map grids to target the children in class. Times tables starters all this half term. |  | Prepare for MTC - use individual heat map grids to target the children in class. Times tables starters all this half term. |


| Number and Place Value | Multiplication and Division | Addition and Subtraction | Fractions/Decimals | Geometry | Statistics | Measures |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |


| Summer 2 | Week 1 MTC testing | Week 2 MTC testing | Week 3 MTC testing | Week 4 | Week 5 | Week 6 | Week 7 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Prepare for MTC - use individual heat map grids to target the children in class. Times tables starters all this half term. | Prepare for MTC - use individual heat map grids to target the children in class. Times tables starters all this half term. | Prepare for MTC - use individual heat map grids to target the children in class. Times tables starters all this half term. | Multiplication and Division <br> Recognise and use factor pairs and commutativity in mental calculations. <br> One factor of 36 is 4 , what is its pair? | Multiplication and Division <br> Doubling and having numbers up to 4 digits. |  | $\begin{aligned} & \dot{0} \\ & \text { B } \\ & 0 \\ & 0 \\ & 0 \\ & 0 \\ & 0 \end{aligned}$ |
| 悉 <br>  | 完 |  |  |  | $\begin{aligned} & \text { Statistics and Measures and } \\ & \text { Review } \end{aligned}$ |  |  |
| $\begin{aligned} & \frac{y y}{0} \\ & \frac{0}{\pi x} \\ & \hline \end{aligned}$ | Prepare for MTC - use individual heat map grids to target the children in class. Times tables starters all this half term. | Prepare for MTC - use individual heat map grids to target the children in class. Times tables starters all this half term. | Prepare for MTC - use individual heat map grids to target the children in class. Times tables starters all this half term. | TTRS Counting Sticks | TTRS Counting Sticks | TTRS Counting Sticks | $\begin{aligned} & 3 \\ & \stackrel{\rightharpoonup}{i} \\ & \stackrel{y}{n} \end{aligned}$ |


| Autumn 1 | Week 1 | Week 2 | Week 3 | Week 4 | Week 5 | Week 6 | Week 7 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \text { Basic Skills / Daily Mental } \\ & \text { Maths } \end{aligned}$ | Counting <br> Count forwards and backwards in steps of powers of 10 from any given number up to 1000000. <br> Use counting sticks, and/or Gattegno charts to model counting. |  | Using partitioning to add with increasingly larger numbers (move on to bigger numbers as needed) $\begin{gathered} 432+123=400+100 \\ 30+20 \\ 2+3 \end{gathered}$ | Using partitioning to subtract (move on to bigger numbers as needed). $432-123=423-100-20-3$ | Count on a number line to subtract (move on to bigger numbers as needed). $\begin{gathered} 300-99= \\ 99+1=100 \\ 100+200=300 \end{gathered}$ <br> So... $200+1=201$ | Multiples and Factors <br> Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers. |  |
| $\begin{aligned} & \dot{E} \\ & i \\ & n_{n}^{n} \\ & \sum_{n}^{\pi} \end{aligned}$ | Place Value <br> Read, write, order and compare numbers to at least 1000000 and determine the value of each digit. | Place Value <br> Round any number up to 1000000 to the nearest $10,100,1000$, 10000 and 100000 . | Addition <br> Add whole numbers with more than 4 digits, including using formal written methods (columnar addition) | Subtraction <br> Subtract whole numbers with more than 4 digits, including using formal written methods (columnar subtraction) | Addition \& Subtraction Problem Solving week <br> Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why. <br> Use a variety of resources such as NRICH worded problems to enable the children to practise | Geometry <br> Identify 3-D shapes, including cubes and other cuboids, from 2-D representations. <br> Bring empty packaging such as toothpaste box, Toblerone box etc. Cut them open so the children see the nets and discuss the 2D shapes on the faces. Allow the children to investigate many everyday packages |  |
|  | Solve number problems and practical problems that involve all of the above. | Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy. | Solve addition multi-step problems in contexts, deciding which operations and methods to use and why. | Solve subtraction multi-step problems in contexts, deciding which operations and methods to use and why. | their addition and subtraction skills learnt in various contexts. Allow them to estimate answers, work in pairs/independently/groups, reason, explain and work systematically. | before moving on to identifying nets and creating their own. |  |
|  | TTRS <br> Counting Sticks <br> Children should be secure with all of their tables up to x 12 by the end of Year 4. Identify those who are not and target them through TTRS heat maps and daily recall. | TTRS <br> Counting Sticks | TTRS Counting Sticks | TTRS <br> Counting Sticks | TTRS <br> Counting Sticks | TTRS <br> Counting Sticks |  |


| Autumn 2 | Week 1 | Week 2 | Week 3 | Week 4 | Week 5 | Week 6 | Week 7 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $X 10,100$ and 1000 mentally. <br> Children need to understand that the answer increases in multiplication. The Dienes and the 1, 10, 100, 1000 on place value board show visually what happens as the digits move left. | Divide by 10, 100 and 1000 mentally. <br> Children need to understand that the answer decreases in division. The Dienes and the 1, 10, 100, 1000 on place value board show visually what happens as the digits move right. | Prime Numbers and Prime Factors <br> Know and use the vocabulary of prime numbers, prime factors and composite (nonprime) numbers. | Number. <br> Establish whether a number up to 100 is prime and recall prime numbers up to 19 . | Recognise factor pairs to aid mental calculations $\begin{aligned} 4 \times 3 & =12 \\ 40 \times 3 & =120 \\ 400 \times 3 & =1200 \end{aligned}$ |  | Counting in fractions past 1 <br> Fraction number linear lines |
|  | Multiplication <br> Multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers | Division <br> Divide numbers up to 4 digits by a onedigit number using the formal written method of short division and interpret remainders appropriately for the context. | Fractions <br> Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths | Fractions <br> Compare and order fractions whose denominators are all multiples of the same number. | Measurement <br> Calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm2) and square metres (m2) and estimate the area of irregular shapes. |  | Measurement Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres |
|  | Solve problems involving multiplication. | Solve problems involving division. | Apply these skills in different conte representations. | and through different visual | Find the value of missing lengths of sides using the formulae for area. |  | Use all four operations to solve problems involving measure. |
| $\frac{\mathscr{y}}{\frac{2}{5}}$ | TTRS Counting Sticks <br> Children should be secure with all of their tables up to x12 by the end of Year 4. Identify those who are not and target them through TTRS heat maps and daily recall. | TTRS Counting Sticks | TTRS Counting Sticks | TTRS Counting Sticks | TTRS Counting Sticks |  | TTRS Counting Sticks |


| $\begin{aligned} & \hline \text { Spring } \\ & 1 \\ & \hline \end{aligned}$ | Week 1 | Week 2 | Week 3 | Week 4 | Week 5 | Week 6 | Week 7 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  <br> 霛 |  |  |  |  |  |  | Measurement (Time) <br> Know (and convert) the number of seconds in a minute, and the number of days in each month, year and leap year. |
| $\begin{aligned} & \text { 息 } \\ & \text { n } \\ & \text { n } \\ & n_{n}^{\pi} \end{aligned}$ | Geometry <br> Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles <br> Draw given angles, and measure them in degrees ( o ) | Addition and Subtraction, <br> Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why. | Multiplication and Division <br> Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes. | Fractions (Decimals) <br> Read, write, order and compare places. <br> Round decimals with two deci and to one decimal place. <br> Recognise and use thousandths and decimal equivalents. <br> Read and write decimal numbe 71/100]. | mbers with up to three decimal <br> places to the nearest whole number <br> d relate them to tenths, hundredths <br> as fractions [for example, $0.71=$ |  | Statistics <br> Complete, read and interpret information in tables, including timetables. |
|  | Distinguish between regular and irregular polygons based on reasoning about equal sides and angles | Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy. | Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates. | Solve problems involving numb | p to three decimal places. |  | Begin to decide which representations of data are most appropriate and why. |
| $\begin{aligned} & \frac{\pi}{0} \\ & \frac{1}{5} \\ & x \end{aligned}$ | TTRS <br> Counting Sticks <br> Children should be secure with all of their tables up to x12 by the end of Year 4. Identify those who are not and target them through TTRS heat maps and daily recall. | TTRS <br> Counting Sticks | TTRS <br> Counting Sticks | TTRS <br> Counting Sticks | TTRS <br> Counting Sticks |  | TTRS <br> Counting Sticks |


| Spring 2 | Week 1 | Week 2 | Week 3 | Week 4 | Week 5 |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Roman Numerals <br> Read Roman Numerals to 1000 (M) and recognise years written in Roman Numerals. | Partition to multiply $\begin{gathered} 123 \times 5= \\ 100 \times 5 \\ 20 \times 5 \\ 3 \times 5 \end{gathered}$ | Partition to divide 126 divided by $6=$ 120 divided by 6 then 6 divided by 6 | Multiplication and Division <br> Recognise and use factor pairs and commutativity in mental calculations. <br> One factor of 36 is 4 , what is its pair? |  |
| $\sum_{\substack{n}}^{n}$ | Measurement <br> Convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre) | Geometry <br> Distinguish between regular and irregular polygons based on reasoning about equal sides and angles. | Fractions <br> Add and subtract fractions with the same denominator and denominators that are multiples of the same number. | Fractions <br> Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams. |  |
|  | Use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling. | Become accurate in drawing lines with a ruler to the nearest millimetre, and measuring with a protractor. | Solve problems which require knowing percentage and decimal equivalents of $1 / 2,1 / 4,1 / 5,2 / 5,4 / 5$ and those fractions with a denominator of a multiple of 10 or 25. |  |  |
| $\begin{aligned} & \mathscr{0} \\ & \frac{0}{\pi} \\ & \underset{x}{\pi} \end{aligned}$ | TTRS <br> Counting Sticks <br> Children should be secure with all of their tables up to x12 by the end of Year 4. Identify those who are not and target them through TTRS heat maps and daily recall. | TTRS Counting Sticks | TTRS Counting Sticks | TTRS <br> Counting Sticks | TTRS <br> Counting Sticks |


| Summer 1 | Week 1 | Week 2 | Week 3 | Week 4 | Week 5 | Week 6 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 告 | Adding using number inside a number strategy. $37+45=37+3+40+2$ <br> Progress to apply the above skill to 3 and 4 digit numbers | Compensate to subtract $35-18=\text { ? }$ <br> Add two to 18 to make 20 (friendly number)... $35-20=15$ <br> Then add 2 back on... $15+2=17$ <br> Progress to apply the above skill to 3 and 4 digit numbers. | Subtracting from 90, 180 and 360 using number inside a number method (see Spring 1 Week 1) | Use near doubles to add $123+125=125+125-2$ |  | Known Facts - Halving <br> Half of $1000=500$ <br> Half of $500=250$ <br> Half of $300=150$ <br> Half of $100=50$ <br> Half of $50=25$ |
| $\sum_{i=1}^{n}$ | Statistics <br> Solve comparison, sum and difference problems using information presented in a line graph. | Number <br> Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero. | Measurement <br> Estimate volume [for example, using 1 cm 3 blocks to build cuboids (including cubes)] and capacity [for example, using water] | Geometry <br> Identify: angles at a point and one whole turn (total 3600), angles at a point on a straight line and $1 / 2$ a turn (total 1800) and other multiples of 90 o . |  | Place Value <br> Read Roman numerals to 1000 (M) and recognise years written in Roman numerals |
|  | Begin to decide which representations of data are most appropriate and why. | Solve number problems and practical problems that involve all of the above | Missing measures questions for volume to find a missing value. <br> Use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling. | Use angle sum facts and other properties to make deductions about missing angles and relate these to missing number problems |  | Solve number problems and practical problems that involve all of the above |
| $\begin{aligned} & \mathscr{O} \\ & \stackrel{y}{\pi} \\ & \underset{x}{6} \end{aligned}$ | TTRS <br> Counting Sticks <br> Children should be secure with all of their tables up to x 12 by the end of Year 4. Identify those who are not and target them through TTRS heat maps and daily recall. | TTRS Counting Sticks | TTRS Counting Sticks | TTRS <br> Counting Sticks |  | TTRS <br> Counting Sticks |



Year 6 Maths Half Termly Planning 2022/23

| Autumn 1 | Week 1 | Week 2 | Week 3 | Week 4 | Week 5 | Week 6 | Week 7 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Using partitioning to add with increasingly larger numbers (move on to bigger numbers as needed) $\begin{gathered} 432+123=400+100 \\ 30+20 \\ 2+3 \end{gathered}$ <br> Counting forwards and backwards in hundreds and thousands from any given numbers. Rapid recall of the value of each digit in given numbers to 10,000,000 | Number inside a number to calculate - $360-95=360-60-30-5$ <br> Progress to larger numbers. <br> Multiplying and dividing numbers by 10, 100, 1000. | Count on a number line to subtract (move on to bigger numbers as needed). $\begin{gathered} 300-99= \\ 99+1=100 \\ 100+200=300 \\ \text { So... } 200+1=201 \end{gathered}$ <br> Inverse operations including multiples and factors. | Multiply by partitioning $132 \times 5=100 \times 530 \times 5 \text { and } 2 x$ <br> 5 <br> Progress to larger numbers. | Using known multiplication facts and inverse division facts to solve calculations $\begin{aligned} & 7 \times 5=35 \\ & 70 \times 5=350 \end{aligned}$ <br> Progress to larger numbers. |  | Measurement (Time) <br> Know (and convert) the number of seconds in a minute, and the number of days in each month, year and leap year. |
|  | Number <br> Read, write, order and compare numbers up to 10000000 and determine the value of each digit. | Number <br> Round any whole number to a required degree of accuracy. | Addition and Subtraction <br> Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why. | Multiplication Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication | Division <br> Divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context. |  | Multiplication and Division Use their knowledge of the order of operations to carry out calculations involving the four operations |
|  | Solve number and practical problems that involve all of the above. |  | Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy. | Solve problems involving multiplication and division. | Solve problems involving multiplication and division. |  | Explore the order of operations using brackets; for example, 2 $+1 \times 3=5$ and $(2+1) \times 3=9$. |
| $\begin{aligned} & \frac{y}{0} \\ & \frac{\pi}{\tilde{y}} \\ & \end{aligned}$ | TTRS <br> Counting Sticks <br> Children should be secure with all of their tables up to x 12 by the end of Year 4. Identify those who are not and target them through TTRS heat maps and daily recall. | TTRS <br> Counting Sticks | TTRS Counting Sticks | TTRS Counting Sticks | TTRS <br> Counting Sticks |  | TTRS Counting Sticks |


| Autumn 2 | k 1 | Week 2 | Week 3 | Week 4 | Week 5 | Week 6 | Week 7 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Multiples and Factors <br> Identify common multiples and factors. | Multiplication <br> Multiplying by 10, 100 and 1000. Model with a place value board. | Division <br> Dividing by 10, 100 and 1000. Model with a place value board. | Multiplication and Division <br> Multiplying and dividing by 10, 100 and 1000. Model with a place value board. | Addition <br> Use near doubles to add $123+125=125+125-2$ <br> Progress to larger numbers. |  | Compensate to subtract $35-18=\text { ? }$ <br> Add two to 18 to make 20 (friendly number)... $35-20=15$ <br> Then add 2 back on... $15+2=17$ <br> Progress to apply the above skill to 3 and 4 digit numbers. |
|  | Geometry <br> Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons. <br> Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles. | Fractions <br> Use common factors to simplify fractions; use common multiples to express fractions in the same denomination. <br> Compare and order fractions, including fractions $>1$. | Fractions <br> Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions. | Measurement <br> Use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places <br> Convert between miles and kilometres. | Statistics <br> Calculate and interpret the mean as an average. <br> Interpret and construct pie charts and line graphs and use these to solve problems. |  | Measurement (Area and Perimeter) <br> Calculate the area of parallelograms and triangles |
|  | Draw 2-D shapes using given dimensions and angles. | Solve problems involving the abo |  | Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate. <br> Solve problems involving the calculation of percentages [for example, of measures, and such as $15 \%$ of 360 ] and the use of percentages for comparison. | Solve problems involving all of the above in different contexts. |  | Recognise when it is possible to use formulae for area of shapes <br> Solve problems involving the calculation of percentages [for example, of measures, and such as $15 \%$ of 360 ] and the use of percentages for comparison. |
| $\begin{aligned} & \frac{y}{0} \\ & \frac{0}{\boxed{x}} \end{aligned}$ | TTRS <br> Counting Sticks <br> Children should be secure with all of their tables up to $x 12$ by the end of Year 4. Identify those who are not and target them through | TTRS Counting Sticks | TTRS Counting Sticks | TTRS Counting Sticks | TTRS Counting sticks |  | TTRS Counting Sticks |

Year 6 Maths Half Termly Planning 2022/23


| Spring 1 | Week 1 | Week 2 | Week 3 | Week 4 | Week 5 | Week 6 | Week 7 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Basic Skills / Daily Mental Maths | Multiplication \& Division Identify prime numbers. | Multiplication and Division <br> Recognise and use factor pairs and commutativity in mental calculations. <br> One factor of 36 is 4 , what is its pair? | Fractions <br> Find fractions of amounts. | Fractions <br> Find percentages of amounts. | Fractions <br> Recognise and write decimal equivalents to $1 / 41 / 2$ and $3 / 4$. <br> Recall Known Facts: $\begin{aligned} & 25 / 100=0.25=1 / 4 \\ & 50 / 100=0.5=2 / 4 \\ & 75 / 100=0.75=3 / 4 \end{aligned}$ |  | Roman Numerals <br> Read Roman <br> Numerals to 1000 <br> $(M)$ and recognise years written in <br> Roman Numerals. |
|  | Geometry <br> Describe positions on the full coordinate grid (all four quadrants) <br> Draw and translate simple shapes on the coordinate plane, and reflect them in the axes | Division <br> Divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context. | Fractions <br> Identify the value of each digit in numbers given to three decimal places and multiply and divide numbers by 10,100 and 1000 giving answers up to three decimal places. | Fractions <br> Multiply simple pairs of proper fractions, writing the answer in its simplest form [for example, $1 / 4 \times 1 / 2=$ 1/8] <br> Multiply one-digit numbers with up to two decimal places by whole numbers. | Fractions <br> Divide proper fractions by whole numbers [for example, $1 / 3 \div 2=1 / 6$ ] <br> Associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example, 3/8]. <br> Use written division methods in cases where the answer has up to two decimal places. |  | Measurement <br> Calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm3) and cubic metres (m3), and extending to other units [for example, mm3 and km3] |
|  | Solve problems involving missing coordinates. | Solve problems involving the above. | Use written division methods in case places. <br> Solve problems which require answe accuracy. <br> Recall and use equivalences between percentages, including in different | where the answer has up to two decimal to be rounded to specified degrees of mple fractions, decimals and exts. | Solve problems involving multiplication and division. |  | Solve problems involving volume. <br> Recognise when it is possible to use formulae for volume of shapes |
| $\begin{aligned} & \frac{0}{0} \\ & \frac{0}{\pi} \\ & x \end{aligned}$ | TTRS <br> Counting Sticks <br> Children should be secure with all of their tables up to x12 by the end of Year 4. Identify those who are not and target them through TTRS heat maps and daily recall. | TTRS Counting Sticks | TTRS <br> Counting Sticks | TTRS <br> Counting Sticks | TTRS Counting Sticks |  | TTRS Counting sticks |


|  | Known Facts - Halving |  | Partition to multiply | Square Numbers |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Half of $1000=500$ <br> Half of $500=250$ <br> Half of $300=150$ <br> Half of $100=50$ <br> Half of $50=25$ <br> Apply this pattern to larger numbers. | 126 divided by $6=$ <br> 120 divided by 6 then <br> 6 divided by 6 | $\begin{gathered} 123 \times 5= \\ 100 \times 5 \\ 20 \times 5 \\ 3 \times 5 \end{gathered}$ <br> Progress to larger numbers. | Recognise and use square numbers numbers, and the notation for squared (2). | Recognise and use cube numbers, and the notation for cubed (3). |
| $\begin{aligned} & \text { E } \\ & \\ & \sum_{n}^{n} \\ & \sum_{n}^{\pi} \end{aligned}$ | Statistics | Geometry | Number | Four operations |  |
|  | Use simple formulae <br> Generate and describe linear number sequences. | Recognise, describe and build simple 3-D shapes, including making nets <br> Geometry | Use negative numbers in context, and calculate intervals across zero. | Use their knowledge of the order of operation the four operations. <br> Perform mental calculations, including with m | to carry out calculations involving <br> xed operations and large numbers |
|  | Express missing number problems algebraically | Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius |  | Solve problems involving addition, subtraction, multiplication and division <br> Solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts. |  |
|  | Find pairs of numbers that satisfy an equation with two unknowns <br> Enumerate possibilities of combinations of two variables |  |  | Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples |  |
|  | Solve problems involving all of the above. | Draw shapes and nets accurately, using measuring tools and conventional markings and labels for lines and angles. | Solve problems involving interpreting graphs involving negative numbers. | Solve problems involving the calculation of percentages [for example, of measures, and such as $15 \%$ of 360 ] and the use of percentages for comparison. <br> Explore the order of operations using brackets; for example, $2+1 \times 3=5$ and $(2+$ 1) $\times 3=9$. |  |
| $\frac{\frac{\pi}{0}}{\frac{1}{5}}$ | TTRS <br> Counting Sticks | TTRS Counting Sticks | TTRS <br> Counting Sticks | TTRS <br> Counting Sticks | TTRS <br> Counting Sticks |
|  | Children should be secure with all of their tables up to x 12 by the end of Year 4. <br> Identify those who are not and target them through TTRS heat maps and daily recall. |  |  |  |  |


| Summer 1 | Week 1 | Week 2 | Week 3 | Week 4 | Week 5 | Week 6 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |





