As the study of mathematics requires pupils to be fluent in the rapid recall of certain mathematical facts，pupils at Gilberdyke Primary work daily on carefully selected KIRFs（Key Instant Recall Facts）at the beginning of each maths lesson．The ability to know these facts effortlessly enables pupils to focus their attention on and fully develop their understanding of more complex calculations and problem solving．

To ensure fluency，the KIRFs are taught daily for 5－10 minutes and each one is studied for a full half term．The KIRFs are progressive and are planned to ensure the pupils have the fluency required to enable them to instantly recall these facts．Teachers use ongoing formative assessments during these sessions to plan progress within each KIRF and summative assessments are conducted at the end of each half term to check learning and to inform future planning．

|  | Term |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Autumn A | Autumn B | Spring A | Spring B | Summer A | Summer B |
| $\begin{aligned} & \stackrel{\rightharpoonup}{7} \\ & \stackrel{y}{0} \end{aligned}$ | To read and write numbers to 10 in numerals | To know number bonds to 10 | To compare numbers to 10 using＜，＞and＝ | To count in twos．To know doubles and halves to 10 | To make and talk about simple arrays | To find $1 / 4$ and $1 / 2$ of a quantity |
| $$ | To know number bonds for each number to 20 | To count，read and write numbers to 100 in numerals | To know the multiplication \＆the division facts for the 2 times tables | To know the multiplication \＆the division facts for the 5 times tables | To know the multiplication \＆the division facts for the 10 times tables | To know doubles and halves of numbers to 20 |
| $\begin{aligned} & \text { m } \\ & \text { む̃ } \\ & \hline \end{aligned}$ | To know number bonds to 100 | To count in multiples of 50 or 100 | To find 10 or 100 more／less than a given number | To know the multiplication \＆the division facts for the 3 times tables | To know the multiplication \＆the division facts for the 4 times tables | To know the multiplication \＆the division facts for the 8 times tables |
| $\begin{aligned} & \text { + } \\ & \text { む̃ } \\ & \hline \end{aligned}$ | To know the multiplication \＆the division facts for the 6 times tables | To know the multiplication \＆the division facts for the 9 \＆ 11 times tables | To know the multiplication \＆the division facts for the 7 times tables | To know the multiplication \＆the division facts for the 12 times tables | To know the multiplication and division facts for all the times tables up to 12 x 12 | To identify equivalent fractions |
| $\begin{aligned} & \text { に } \\ & \stackrel{\pi}{\approx} \\ & \hline \end{aligned}$ | To round numbers to 1 million to the nearest $10,100,1,000$ | To identify multiples and factors up to 12 x 12 | To identify prime numbers up to 50 | To recall square ñumbers up to $12^{2}$ and the square roots | To know the first 5 cube numbers | To convert between improper fractions and mixed fractions |


|  | To count in powers of 10, forwards and backwards with numbers up to 10 million | To identify common factors of a pair of numbers | To find fractions of amounts | To know common fraction, decimal and percentage equivalents | To divide and multiply by 10,100 and 1,000 | To find simple percentages of amounts ( $1 \%, 5 \%$, 10\%) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |

