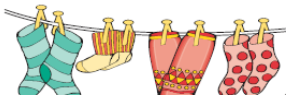

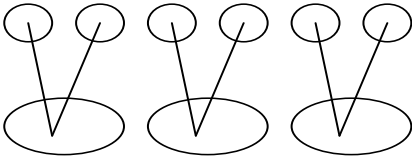
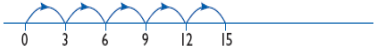

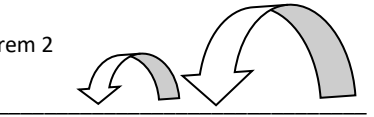


St John the Baptist, Progression in division

	Prerequisite skills and knowledge	Visual models and prompts	Grouping - Number lines	More efficient grouping	Chunking, most efficient method
DIVISION	<p>Understanding of place value</p> <p>Counting on and back in multiples of numbers</p> <p>Division as repeated subtraction.</p> <p>Use arrays to model divisions and related i.e. $20/5 = 4$, $20/4=5$, $5 \times 4=20$ etc.</p> <p>Dividing by 0 = 0</p> <p>Times tables facts Build up from 2, 5 and 10; then 3, 4 and 6; finally 7, 8 and 9</p> <p>Partitioning of numbers</p> <p>Begin to relate to fractions $\frac{1}{2}$ is dividing by 2, $\frac{1}{4}$ is dividing by 4</p> <p>Understand principle of moving columns when \times and \div by 10, 100, 1000</p>	<p>Sharing: 4 groups of 2 socks = 8 socks 8 socks shared between 4 people = 2</p>  <p>There are 6 Easter eggs. They are shared between 3 children how many does each child get?</p> 	<p>Grouping: There are 6 biscuits. How many children can have two biscuits each?</p>  <p>Repeated subtraction on a number line: Start at 15 and count back in 3s</p>  <p>How many 3s in 15?</p>  <p>$15 \div 3 = 5$</p>	<p>Chunking:</p> $\begin{array}{r} 6 \overline{)196} \\ - 60 \quad 6 \times 10 \\ \hline 136 \\ - 60 \quad 6 \times 10 \\ \hline 76 \\ - 60 \quad 6 \times 10 \\ \hline 16 \\ - 12 \quad 6 \times 2 \\ \hline 4 \quad 32 \\ \text{Answer: } \quad 32 \text{ R } 4 \end{array}$ <p>So $656 \div 16 = 41$</p> $\begin{array}{r} 16 \overline{)656} \\ - 160 \quad -16 \times 10 \\ \hline 496 \\ - 160 \quad -16 \times 10 \\ \hline 336 \\ - 160 \quad -16 \times 10 \\ \hline 176 \\ - 160 \quad -16 \times 10 \\ \hline 016 \\ - 016 \quad -16 \times 1 \\ \hline 000 \end{array}$ <p style="text-align: right; color: red;">41</p>	<p>Short division:</p> $\begin{array}{r} 81 \div 3 = \\ \underline{27} \\ 3 \overline{)81} \end{array}$ <p>Long Division - click link for example https://www.mathsisfun.com/long_division.html</p>
	<p>Develop by using more efficient chunks</p> $\begin{array}{r} 320 \quad 16 \times 20 \\ 320 \quad 16 \times 20 \\ \hline 640 \\ \underline{16} \quad 16 \times 1 \\ 656 \quad 41 \end{array}$	<p>Progressing onto Quotient. Remainders as decimals and fractions</p> $\begin{array}{r} 27 \frac{2}{3} \\ 3 \overline{)823} \\ \hline 27.66 \\ 3 \overline{)823.0^20} \end{array}$			
	<p>Key vocabulary: Divide, share equally, halve, equal groups of, divided by, divided into, divisible by, remainder, factor, quotient,</p>	<p>72 ÷ 5 Focus around groups of 5 and knowledge of 5x table</p> <p>4×5 10×5</p> <p>rem 2</p>  <p>0 2 22 72</p>	<p>Write down 16 times table if it helps</p> <p>$1 \times 16 = 16$ $2 \times 16 = 32$ $5 \times 16 = 80$ $10 \times 16 = 160$ $15 \times 16 = 240$ $20 \times 16 = 320$</p>		