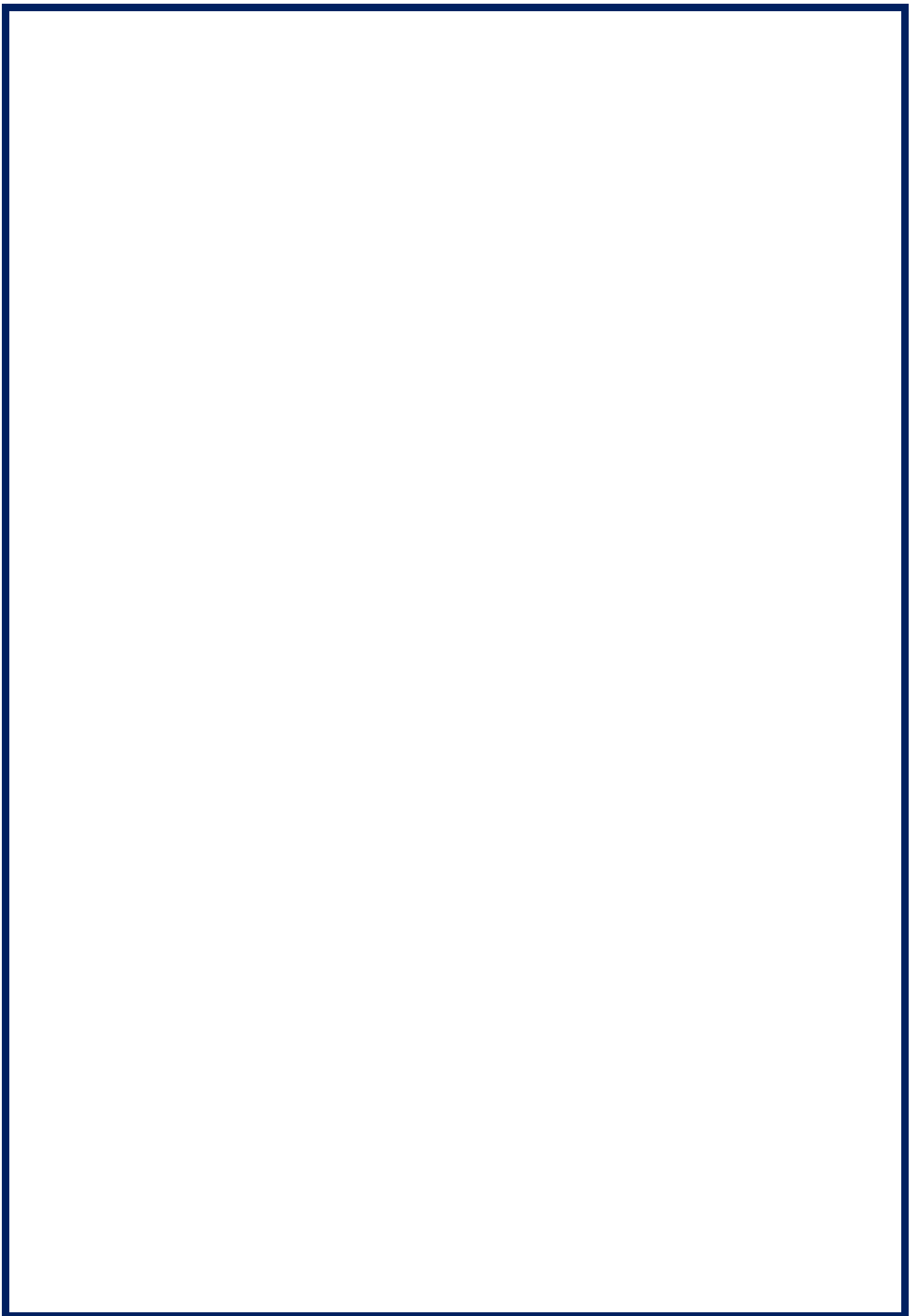


Mental Strategies – Year 3

<p>MC – Manipulate Calculation This should only be attempted with children who are extremely competent mathematicians as it requires a sound understanding of the commutative law of addition.</p>	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>MA1: Manipulate Calculation</p> $45 + 97 = 142$ </div> <div style="text-align: center;"> <p>MA1: Manipulate Calculation</p> $16 + 9 = 25$ </div> </div>
<p>RA – Round and Adjust Children need to be able to say numbers in order, say one number more or less, know the next multiple of 10 and add on 10 more before they can use this method.</p>	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>MA2: Round & Adjust</p> $45 + 97 = 142$ $45 + 100 - 3 = 142$ $145 - 3 = 142$ </div> <div style="text-align: center;"> <p>MA2: Round & Adjust</p> $45 + 9 = 54$ </div> </div>
<p>PA – Partitioning Children need to know the place value of each digit in a 2d number and therefore this is not applicable until Year 2.</p>	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>MA1: Partitioning</p> $57 + 25 = 82$ </div> <div style="text-align: center;"> <p>MA3: Partitioning</p> $43 + 21 = 64$ </div> </div>
<p>CO – Count On Children need to be able to count on in ones or tens from a 2d number.</p>	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>MA4a: Counting On <small>Tens</small></p> $85 + 50 = 135$ </div> <div style="text-align: center;"> <p>MA4b: Counting On <small>Hundreds</small></p> $534 + 300 = 834$ </div> </div>
<p>DA – Double and Adjust Children need to be able to double single digit numbers and then add on one more.</p>	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>MA5: Double & Adjust</p> $16 + 17 = 33$ $16 + 16 + 1 = 33$ $32 + 1 = 33$ </div> <div style="text-align: center;"> <p>MA5: Double & Adjust</p> $7 + 8 = 15$ </div> </div>
<p>NUMBO – Number Bonds Children need to be able to instantly recall number bonds for 10, so that they can use this when adding 3 single digit numbers.</p>	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>MA6: Number Bonds</p> $43 + 9 + 7 + 21 = 80$ </div> <div style="text-align: center;"> <p>MA6: Number Bonds</p> $3 + 4 + 7 = 14$ </div> <div style="text-align: center;"> </div> </div>
<p>Count On</p>	<p>S8b: Quad Jump!</p> $132 - 56 = 76$
<p>Round and Adjust</p>	$132 - 19 =$ $132 - 20 = 112$ $112 + 1 = 113$



<p>Jump This should be taught as a jump of digits. The decimal point does not move, nor do we add or drop a zero. However some children will see a pattern when x whole numbers by a multiple of 10, 100 or 1000.</p>	<p>MM1a: Jump!</p>
<p>Smile Multiplication Children need a secure knowledge of their tables facts and an understanding of the JUMP step to do this. It can be adapted to multiply any multiple of 10, 100 or 1000.</p>	<p>Smile Multiplication 😊</p> <p>$30 \times 80 = 2400$</p> <p>24</p> <ul style="list-style-type: none"> Do the tables bit Count the zeros in the question Put the zeros on your answer!
<p>Partitioning Children need to have a secure understanding of the value of each digit and of the smile method of multiplication to do this.</p>	<p>MM3a: Partitioning</p> <p>$37 \times 4 = 148$</p> <p>$120 + 28 = 148$</p> <p>(30 x 4) (7 x 4)</p> <p>© St. Gabriel's Catholic Primary</p>
<p>Round and Adjust Children need an understanding of rounding to the next multiple of 10, 100 or 1000 or whole number.</p>	<p>MM4: Round & Adjust</p> <p>$49 \times 3 = 147$</p> <p>$(50 \times 3) - (1 \times 3)$</p> <p>$150 - 3 = 147$</p> <p>© St. Gabriel's Catholic Primary</p>
<p>Doubling Children should know all of their single digit doubles and also have a secure understanding of the smile method to do this.</p>	<p>MM5a: Doubling</p> <p>Double 37 = 74</p> <p>$60 + 14 = 74$</p> <hr/> <p>MM5b: Doubling</p> <p>Double 78 = 156</p> <p>$140 + 16 = 156$</p>

<p>Find the Hunk The hunk is the largest multiple of 10, 100 or 1000. The MEGA-HUNK is only for children who are very confident with this method and can do this competently using a number line.</p>	<p>D8a: Find the Hunk! D9: Mega Hunk!</p> <p>$65 \div 4 = 16r1$ $136 \div 4 = 34$</p> <p>The Hunk! Chunk + 4</p> <p>$40 + 25 = 65$</p> <p>↓ ↓ + 4</p> <p>$10 + 6r1 = 16r1$</p> <p>Mega Hunk! Chunk + 4</p> <p>$120 + 16 = 136$</p> <p>↓ ↓ + 4</p> <p>$30 + 4 = 34$</p>
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