

St Meriadoc CE Infant Academy: Non-Negotiables



KIRFs/Times tables to be practiced on a daily basis by all classes to ensure all other skills are embedded.

Mental Mathematics

Key Skills: Fluency

Recall a range of calculations using mixed operations.
Recall shape names/properties.
Add and subtract using a range of strategies.
Tell the time.
Be confident, secure and happy in mental number knowledge.

	Nursery 1	Nursery 2	Reception	Year 1	Year 2																																																																																																																																																																																																																																																																																																
Mental Mathematics	<p>Count in 1's from 0-5 and beyond, forwards and backwards (through songs, chants and rhymes).</p> <p>Subitise to recognize amounts of objects/pictures to 3 without counting, e.g. in the role-play area with food.</p> <p>Notice quickly when a group has 'more' or 'a lot' of objects compared to another.</p>	<p>Count in 1's from 0-10 and beyond, forwards and backwards.</p> <p>Subitise to recognize amounts of objects/pictures to 3/4 without counting.</p> <p>Make finger amounts quickly to 5.</p> <p>Recognise Numicon pieces to 5 and match to a numeral – by their shape and colour.</p> <p>Notice quickly when a group has 'more', 'a lot' or the same number of objects compared to another.</p> <p>Follow a positional language instruction quickly.</p> <p>Recall names of simple 2D and some 3D shapes.</p>	<p>Count in 1s from 0-20 and beyond forwards and backwards.</p> <p>Subitise amounts to 5.</p> <p>Recall number bonds to 5 (without aids) – addition and subtraction facts.</p> <p>Recall some number bonds to 10 (without aids) – addition and subtraction facts.</p> <p>Recall the double facts to double 6.</p> <p>Recall and spot odd and even numbers within 10.</p> <p>Compare sets of objects to 10 - Use the language of 'greater than', 'less than', 'fewer' and 'the same' to compare two sets of objects quickly.</p> <p>Say one more/less than a given number.</p> <p>Add simple numbers mentally, including the doubles e.g. 1+1, 2+2, 3+3, 4+4, 5+5.</p>	<p>Count in 1s from 0-100 forwards and backwards from any number.</p> <p>Confidently count in 2,5 and 10 times tables and answer corresponding questions.</p> <p>KIRFs:</p> <ul style="list-style-type: none"> Number bonds for each number to 10. Doubles and halves of numbers to 10. Tell the time to the nearest hour and half hour. <table border="1" style="font-size: small; text-align: center; margin: 5px;"> <tr><th>+</th><th>0</th><th>1</th><th>2</th><th>3</th><th>4</th><th>5</th><th>6</th><th>7</th><th>8</th><th>9</th><th>10</th></tr> <tr><th>0</th><td>0+0</td><td>0+1</td><td>0+2</td><td>0+3</td><td>0+4</td><td>0+5</td><td>0+6</td><td>0+7</td><td>0+8</td><td>0+9</td><td>0+10</td></tr> <tr><th>1</th><td>1+0</td><td>1+1</td><td>1+2</td><td>1+3</td><td>1+4</td><td>1+5</td><td>1+6</td><td>1+7</td><td>1+8</td><td>1+9</td><td></td></tr> <tr><th>2</th><td>2+0</td><td>2+1</td><td>2+2</td><td>2+3</td><td>2+4</td><td>2+5</td><td>2+6</td><td>2+7</td><td>2+8</td><td></td><td></td></tr> <tr><th>3</th><td>3+0</td><td>3+1</td><td>3+2</td><td>3+3</td><td>3+4</td><td>3+5</td><td>3+6</td><td>3+7</td><td></td><td></td><td></td></tr> <tr><th>4</th><td>4+0</td><td>4+1</td><td>4+2</td><td>4+3</td><td>4+4</td><td>4+5</td><td>4+6</td><td></td><td></td><td></td><td></td></tr> <tr><th>5</th><td>5+0</td><td>5+1</td><td>5+2</td><td>5+3</td><td>5+4</td><td>5+5</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><th>6</th><td>6+0</td><td>6+1</td><td>6+2</td><td>6+3</td><td>6+4</td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><th>7</th><td>7+0</td><td>7+1</td><td>7+2</td><td>7+3</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><th>8</th><td>8+0</td><td>8+1</td><td>8+2</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><th>9</th><td>9+0</td><td>9+1</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><th>10</th><td>10+0</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table> <p>Know that addition can be done in any order.</p> <p>Find a small difference by counting up.</p> <p>Know how to add 9 to a number by adding 10 and subtracting 1.</p>	+	0	1	2	3	4	5	6	7	8	9	10	0	0+0	0+1	0+2	0+3	0+4	0+5	0+6	0+7	0+8	0+9	0+10	1	1+0	1+1	1+2	1+3	1+4	1+5	1+6	1+7	1+8	1+9		2	2+0	2+1	2+2	2+3	2+4	2+5	2+6	2+7	2+8			3	3+0	3+1	3+2	3+3	3+4	3+5	3+6	3+7				4	4+0	4+1	4+2	4+3	4+4	4+5	4+6					5	5+0	5+1	5+2	5+3	5+4	5+5						6	6+0	6+1	6+2	6+3	6+4							7	7+0	7+1	7+2	7+3								8	8+0	8+1	8+2									9	9+0	9+1										10	10+0											<p>Confidently count in 2,5,10,3 times tables and answer corresponding questions.</p> <p>KIRFs:</p> <ul style="list-style-type: none"> Revision of number bonds to 10. Number bonds for each number to 20. Doubles and halves of numbers to 20. Multiplication and division facts for the 2, 5 and 10 times tables. Tell the time to the nearest hour, half hour, quarter hour, 5 minutes. <p>Addition facts:</p> <table border="1" style="font-size: x-small; text-align: center; margin: 5px;"> <tr><th>+</th><th>0</th><th>1</th><th>2</th><th>3</th><th>4</th><th>5</th><th>6</th><th>7</th><th>8</th><th>9</th><th>10</th></tr> <tr><th>0</th><td>0+0</td><td>0+1</td><td>0+2</td><td>0+3</td><td>0+4</td><td>0+5</td><td>0+6</td><td>0+7</td><td>0+8</td><td>0+9</td><td>0+10</td></tr> <tr><th>1</th><td>1+0</td><td>1+1</td><td>1+2</td><td>1+3</td><td>1+4</td><td>1+5</td><td>1+6</td><td>1+7</td><td>1+8</td><td>1+9</td><td>1+10</td></tr> <tr><th>2</th><td>2+0</td><td>2+1</td><td>2+2</td><td>2+3</td><td>2+4</td><td>2+5</td><td>2+6</td><td>2+7</td><td>2+8</td><td>2+9</td><td>2+10</td></tr> <tr><th>3</th><td>3+0</td><td>3+1</td><td>3+2</td><td>3+3</td><td>3+4</td><td>3+5</td><td>3+6</td><td>3+7</td><td>3+8</td><td>3+9</td><td>3+10</td></tr> <tr><th>4</th><td>4+0</td><td>4+1</td><td>4+2</td><td>4+3</td><td>4+4</td><td>4+5</td><td>4+6</td><td>4+7</td><td>4+8</td><td>4+9</td><td>4+10</td></tr> <tr><th>5</th><td>5+0</td><td>5+1</td><td>5+2</td><td>5+3</td><td>5+4</td><td>5+5</td><td>5+6</td><td>5+7</td><td>5+8</td><td>5+9</td><td>5+10</td></tr> <tr><th>6</th><td>6+0</td><td>6+1</td><td>6+2</td><td>6+3</td><td>6+4</td><td>6+5</td><td>6+6</td><td>6+7</td><td>6+8</td><td>6+9</td><td>6+10</td></tr> <tr><th>7</th><td>7+0</td><td>7+1</td><td>7+2</td><td>7+3</td><td>7+4</td><td>7+5</td><td>7+6</td><td>7+7</td><td>7+8</td><td>7+9</td><td>7+10</td></tr> <tr><th>8</th><td>8+0</td><td>8+1</td><td>8+2</td><td>8+3</td><td>8+4</td><td>8+5</td><td>8+6</td><td>8+7</td><td>8+8</td><td>8+9</td><td>8+10</td></tr> <tr><th>9</th><td>9+0</td><td>9+1</td><td>9+2</td><td>9+3</td><td>9+4</td><td>9+5</td><td>9+6</td><td>9+7</td><td>9+8</td><td>9+9</td><td>9+10</td></tr> <tr><th>10</th><td>10+0</td><td>10+1</td><td>10+2</td><td>10+3</td><td>10+4</td><td>10+5</td><td>10+6</td><td>10+7</td><td>10+8</td><td>10+9</td><td>10+10</td></tr> </table>	+	0	1	2	3	4	5	6	7	8	9	10	0	0+0	0+1	0+2	0+3	0+4	0+5	0+6	0+7	0+8	0+9	0+10	1	1+0	1+1	1+2	1+3	1+4	1+5	1+6	1+7	1+8	1+9	1+10	2	2+0	2+1	2+2	2+3	2+4	2+5	2+6	2+7	2+8	2+9	2+10	3	3+0	3+1	3+2	3+3	3+4	3+5	3+6	3+7	3+8	3+9	3+10	4	4+0	4+1	4+2	4+3	4+4	4+5	4+6	4+7	4+8	4+9	4+10	5	5+0	5+1	5+2	5+3	5+4	5+5	5+6	5+7	5+8	5+9	5+10	6	6+0	6+1	6+2	6+3	6+4	6+5	6+6	6+7	6+8	6+9	6+10	7	7+0	7+1	7+2	7+3	7+4	7+5	7+6	7+7	7+8	7+9	7+10	8	8+0	8+1	8+2	8+3	8+4	8+5	8+6	8+7	8+8	8+9	8+10	9	9+0	9+1	9+2	9+3	9+4	9+5	9+6	9+7	9+8	9+9	9+10	10	10+0	10+1	10+2	10+3	10+4	10+5	10+6	10+7	10+8	10+9	10+10
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			<p>Subtract simple numbers mentally, including a half of a double, e.g. 2-1, 4-2, 6-3, 8-4, 10-5.</p> <p>Begin to count in steps of 2, 5 and 10</p> <p>Recall names of 2D shapes.</p> <p>Know simple properties of 2D shapes.</p> <p>Know some names of 3D shapes.</p> <p>Mathematical reasoning and explaining strategies.</p>	<p>Use addition and subtraction as inverse operations.</p> <p>Know days, months and seasons in order.</p> <p>Know properties of 2D and some 3D shapes e.g. name the shape.</p> <p>Practice counting around the clock- 5's, 10's etc and use appropriate language.</p> <p>Understand how to read scales quickly.</p> <p>Mathematical reasoning and explaining strategies.</p>	<p>Subtraction facts:</p> <table border="1"> <tr><th>-</th><th>0</th><th>1</th><th>2</th><th>3</th><th>4</th><th>5</th><th>6</th><th>7</th><th>8</th><th>9</th><th>10</th></tr> <tr><th>0</th><td>0-0</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><th>1</th><td>1-0</td><td>1-1</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><th>2</th><td>2-0</td><td>2-1</td><td>2-2</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><th>3</th><td>3-0</td><td>3-1</td><td>3-2</td><td>3-3</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><th>4</th><td>4-0</td><td>4-1</td><td>4-2</td><td>4-3</td><td>4-4</td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><th>5</th><td>5-0</td><td>5-1</td><td>5-2</td><td>5-3</td><td>5-4</td><td>5-5</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><th>6</th><td>6-0</td><td>6-1</td><td>6-2</td><td>6-3</td><td>6-4</td><td>6-5</td><td>6-6</td><td></td><td></td><td></td><td></td></tr> <tr><th>7</th><td>7-0</td><td>7-1</td><td>7-2</td><td>7-3</td><td>7-4</td><td>7-5</td><td>7-6</td><td>7-7</td><td></td><td></td><td></td></tr> <tr><th>8</th><td>8-0</td><td>8-1</td><td>8-2</td><td>8-3</td><td>8-4</td><td>8-5</td><td>8-6</td><td>8-7</td><td>8-8</td><td></td><td></td></tr> <tr><th>9</th><td>9-0</td><td>9-1</td><td>9-2</td><td>9-3</td><td>9-4</td><td>9-5</td><td>9-6</td><td>9-7</td><td>9-8</td><td>9-9</td><td></td></tr> <tr><th>10</th><td>10-0</td><td>10-1</td><td>10-2</td><td>10-3</td><td>10-4</td><td>10-5</td><td>10-6</td><td>10-7</td><td>10-8</td><td>10-9</td><td>10-10</td></tr> <tr><th>11</th><td></td><td>11-1</td><td>11-2</td><td>11-3</td><td>11-4</td><td>11-5</td><td>11-6</td><td>11-7</td><td>11-8</td><td>11-9</td><td>11-10</td></tr> <tr><th>12</th><td></td><td></td><td>12-2</td><td>12-3</td><td>12-4</td><td>12-5</td><td>12-6</td><td>12-7</td><td>12-8</td><td>12-9</td><td>12-10</td></tr> <tr><th>13</th><td></td><td></td><td></td><td>13-3</td><td>13-4</td><td>13-5</td><td>13-6</td><td>13-7</td><td>13-8</td><td>13-9</td><td>13-10</td></tr> <tr><th>14</th><td></td><td></td><td></td><td></td><td>14-4</td><td>14-5</td><td>14-6</td><td>14-7</td><td>14-8</td><td>14-9</td><td>14-10</td></tr> <tr><th>15</th><td></td><td></td><td></td><td></td><td></td><td>15-5</td><td>15-6</td><td>15-7</td><td>15-8</td><td>15-9</td><td>15-10</td></tr> <tr><th>16</th><td></td><td></td><td></td><td></td><td></td><td></td><td>16-6</td><td>16-7</td><td>16-8</td><td>16-9</td><td>16-10</td></tr> <tr><th>17</th><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>17-7</td><td>17-8</td><td>17-9</td><td>17-10</td></tr> <tr><th>18</th><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>18-8</td><td>18-9</td><td>18-10</td></tr> <tr><th>19</th><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>19-9</td><td>19-10</td></tr> <tr><th>20</th><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>20-10</td></tr> </table> <p>Find a difference by counting up using 2-digit numbers.</p> <p>Know patterns of similar calculations e.g. 3+5=8, 13+5=18, 30+50=80.</p> <p>Know the inverse calculations for addition and subtractions when asked and prompted.</p>	-	0	1	2	3	4	5	6	7	8	9	10	0	0-0											1	1-0	1-1										2	2-0	2-1	2-2									3	3-0	3-1	3-2	3-3								4	4-0	4-1	4-2	4-3	4-4							5	5-0	5-1	5-2	5-3	5-4	5-5						6	6-0	6-1	6-2	6-3	6-4	6-5	6-6					7	7-0	7-1	7-2	7-3	7-4	7-5	7-6	7-7				8	8-0	8-1	8-2	8-3	8-4	8-5	8-6	8-7	8-8			9	9-0	9-1	9-2	9-3	9-4	9-5	9-6	9-7	9-8	9-9		10	10-0	10-1	10-2	10-3	10-4	10-5	10-6	10-7	10-8	10-9	10-10	11		11-1	11-2	11-3	11-4	11-5	11-6	11-7	11-8	11-9	11-10	12			12-2	12-3	12-4	12-5	12-6	12-7	12-8	12-9	12-10	13				13-3	13-4	13-5	13-6	13-7	13-8	13-9	13-10	14					14-4	14-5	14-6	14-7	14-8	14-9	14-10	15						15-5	15-6	15-7	15-8	15-9	15-10	16							16-6	16-7	16-8	16-9	16-10	17								17-7	17-8	17-9	17-10	18									18-8	18-9	18-10	19										19-9	19-10	20											20-10
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					<p>Add and subtract mentally: a two-digit number and ones, a two-digit number and tens, two two-digit numbers, adding three one-digit numbers.</p> <p>Use knowledge of number facts and place value to multiply or divide mentally e.g. $10/2=5$</p> <p>Know left/right, quarter, half and three-quarter turns and show this physically.</p> <p>Know the properties of 2D and 3D shapes and describe them accurately.</p> <p>Understand how to read and interpret scales accurately.</p> <p>Mathematical reasoning and explaining strategies.</p>
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