



## St. John the Baptist Primary

### Mental Maths Keystones



Mental Maths Keystones provide pupils with automatic recall of basic number facts. The Keystones comprise of:-

- One digit number add one digit number facts (and their inverses).
- All multiplication facts (and their inverses).

These facts are split into manageable chunks for each stage of the primary school. The progression and rate of learning are shown in the table below. Many pupils will have recall of facts at a faster pace but the Mental Maths Keystones are designed to ensure that by the end of Primary 5 ALL pupils (except those with an identified learning difficulty) will have the basic skills of numeracy. The automatic recall of these facts enables pupils to complete calculations quicker and more accurately. The basic number facts they learn transfer into more complicated calculations e.g.  $8 \times 7 = 56$  helps pupils calculate  $80 \times 70$ .

Pupils are given practice of using and learning the Maths Keystones for their particular stage on a daily basis. Teachers use a range of strategies including games, songs, speed sums, missing numbers etc. to introduce and consolidate learning.

Whilst teachers should focus on the Keystones for their particular stage it is important that they constantly revisit and consolidate the core learning from the Keystones covered in previous stages. Pupils are encouraged to use the commutative law switching numbers around in addition and multiplication sums to get the same answer e.g. because  $3 + 4 = 7$  then  $4 + 3 = 7$ , because  $2 \times 4 = 8$  then  $4 \times 2 = 8$ . Pupils are also encouraged to see the link between addition and subtraction e.g. because  $3 + 4 = 7$  then  $7 - 4 = 3$  and  $7 - 3 = 4$  and the link between multiplication and division e.g. because  $3 \times 5 = 15$  then  $15 \div 3 = 5$  and  $15 \div 5 = 3$ . Understanding these links reduces the number of facts pupils need to learn and deepens pupils' knowledge of the number processes.

Pupils should be secure in the Mental Maths Keystones by the end of Primary 5 but should continue to revisit each concept in Primary 6 and 7 as required to ensure instant recall in the long term. Pupils should be assessed regularly at all stages to ensure they are 'on track' with their learning of Mental Maths keystones.

# St. John the Baptist Primary Mental Maths Keystone Progression

Black- new facts      Red italics- inverse of previously learned facts (PL-Prior Learning)

Primary	Terms 1 & 2			Term 3	Term 4
Primary 1	$1 + 1$ $2 + 2$			$3 + 3$ $4 + 4$ $5 + 5$	$1 + 2$ $2 + 3$
Primary 2	$2 + 8$ $3 + 7$ $4 + 6$			$4 + 2$ $5 + 2$ $6 + 2$ $7 + 2$ $9 + 2$ $4 + 3$ $5 + 3$ $6 + 3$	
Primary 3	$3 + 8$ $3 + 9$ $4 + 7$ $4 + 8$ $4 + 9$ $1 \times 10$ $2 \times 10$ $3 \times 10$ $4 \times 10$ $5 \times 10$ $6 \times 10$ $7 \times 10$ $8 \times 10$ $9 \times 10$ $10 \times 10$ $11 \times 10$ $12 \times 10$			$4 + 5$ $5 + 6$ $6 + 7$ $7 + 8$ $8 + 9$ $1 \times 5$ $2 \times 5$ $3 \times 5$ $4 \times 5$ $5 \times 5$ $6 \times 5$ $7 \times 5$ $8 \times 5$ $9 \times 5$ $10 \times 5$ (PL) $11 \times 5$ $12 \times 5$	$5 + 9$ $6 + 9$ $7 + 9$ $5 + 8$ $6 + 8$ $1 \times 2$ $2 \times 2$ $3 \times 2$ $4 \times 2$ $5 \times 2$ (PL) $6 \times 2$ $7 \times 2$ $8 \times 2$ $9 \times 2$ $10 \times 2$ (PL) $11 \times 2$ $12 \times 2$
Primary 4	$1 \times 3$ $2 \times 3$ (PL) $3 \times 3$ $4 \times 3$ $5 \times 3$ (PL) $6 \times 3$ $7 \times 3$ $8 \times 3$ $9 \times 3$ $10 \times 3$ (PL) $11 \times 3$ $12 \times 3$			$1 \times 4$ $2 \times 4$ (PL) $3 \times 4$ (PL) $4 \times 4$ $5 \times 4$ (PL) $6 \times 4$ $7 \times 4$ $8 \times 4$ $9 \times 4$ $10 \times 4$ (PL) $11 \times 4$ $12 \times 4$	$1 \times 8$ $2 \times 8$ (PL) $3 \times 8$ (PL) $4 \times 8$ (PL) $5 \times 8$ (PL) $6 \times 8$ $7 \times 8$ $8 \times 8$ $9 \times 8$ $10 \times 8$ (PL) $11 \times 8$ $12 \times 8$
Primary 5	$1 \times 6$ $2 \times 6$ (PL) $3 \times 6$ (PL) $4 \times 6$ (PL) $5 \times 6$ (PL) $6 \times 6$ $7 \times 6$ $8 \times 6$ $9 \times 6$ $10 \times 6$ (PL) $11 \times 6$ $12 \times 6$	$1 \times 7$ $2 \times 7$ (PL) $3 \times 7$ (PL) $4 \times 7$ (PL) $5 \times 7$ (PL) $6 \times 7$ (PL) $7 \times 7$ $8 \times 7$ (PL) $9 \times 7$ $10 \times 7$ (PL) $11 \times 7$ $12 \times 7$	$1 \times 9$ $2 \times 9$ (PL) $3 \times 9$ (PL) $4 \times 9$ (PL) $5 \times 9$ (PL) $6 \times 9$ (PL) $7 \times 9$ (PL) $8 \times 9$ (PL) $9 \times 9$ $10 \times 9$ (PL) $11 \times 9$ $12 \times 9$	$1 \times 11$ (PL) $2 \times 11$ (PL) $3 \times 11$ (PL) $4 \times 11$ (PL) $5 \times 11$ (PL) $6 \times 11$ (PL) $7 \times 11$ (PL) $8 \times 11$ (PL) $9 \times 11$ (PL) $10 \times 11$ (PL) $11 \times 11$ $12 \times 11$	$1 \times 12$ (PL) $2 \times 12$ (PL) $3 \times 12$ (PL) $4 \times 12$ (PL) $5 \times 12$ (PL) $6 \times 12$ (PL) $7 \times 12$ (PL) $8 \times 12$ (PL) $9 \times 12$ (PL) $10 \times 12$ (PL) $11 \times 12$ (PL) $12 \times 12$
Primary 6 & 7	Recall instantly all 32 addition facts and times tables up to and including $\times 12$				