'Learning by Heart'

Developing children's knowledge of mathematical facts so that they know them 'by heart' is a valuable tool to support calculation strategies, and also helps to build confidence. Regular practice is needed to secure knowledge and help children instantly recall facts.

We encourage children to think 'Can I do this in my head?' Having a range of number facts at their fingertips really empowers the children and enables them to approach tasks with confidence.

Year 4 Autumn Term 1: Know all pairs of numbers that total 100

10 + 90 = 100	5 + 95 = 100	3 + 97 = 100
20 + 80 = 100	15 + 85 = 100	12 + 88 = 100
30 + 70 = 100	25 + 75 = 100	24 + 76 = 100
40 + 60 = 100	35 + 65 = 100	39 + 61 = 100
50 + 50 = 100	45 + 55 = 100	47 + 53 = 100
60 + 40 = 100	55 + 45 = 100	51 + 49 = 100
70 + 30 = 100	65 + 35 = 100	66 + 34 = 100
80 + 20 = 100	75 + 25 = 100	78 + 22 = 100
90 + 10 = 100	85 + 15 = 100	89 + 11 = 100
	95 + 5 = 100	93 + 7 = 100

Practical ideas to help your child

- Encourage your child to quickly identify multiples of 10 as numbers which have 0 or 50 in the units column.
- Encourage links with number bonds to 10 e.g. 2 + 8 = 10 so 20 + 80 = 100, etc
- Link to money – how to make £1.00 or change from £1.00 – play shops.
- Help your child to be logical and work through the numbers in a sequence as this helps speed and accuracy. Once able to list the facts, then challenge them by giving them a number and they have to think of its partner.

Vocabulary

add addition number bonds
total 100 pairs altogether make

Autumn Term 2: Know multiplication and division facts for x6 and x12 tables

For example:

0 x 6 = 0	6 x 0 = 0		
1 x 6 = 6	6 x 1 = 6	6 ÷ 6 = 1	6 ÷ 1 = 6
2 x 6 = 12	6 x 2 = 12	12 ÷ 6 = 2	12 ÷ 2 = 6
3 x 6 = 18	6 x 3 = 18	18 ÷ 6 = 3	18 ÷ 3 = 6
4 x 6 = 24	6 x 4 = 24	24 ÷ 6 = 4	24 ÷ 4 = 6
5 x 6 = 30	6 x 5 = 30	30 ÷ 6= 5	30 ÷ 5 = 6
6 x 6 = 36	6 x 6 = 36	36 ÷ 6 = 6	36 ÷ 6 = 6
7 x 6 = 42	6 x 7 = 42	42 ÷ 6 = 7	42 ÷ 7 = 6
8 x 6 = 48	6 x 8 = 48	48 ÷ 6 = 8	48 ÷ 8 = 6
9 x 6 = 54	6 x 9 = 54	54 ÷ 6 = 9	54 ÷ 9 = 6
10 x 6 = 60	6 x 10 = 60	60 ÷ 6 = 10	60 ÷ 10 = 6
11 x 6 = 66	6 x 11 = 66	66 ÷ 6 = 11	66 ÷ 11 = 6
12 x 6 = 72	6 x 12 = 72	72 ÷ 6 = 12	72 ÷ 12 = 6

Practical ideas to help your child

Chanting is still an effective way to learn multiplication tables. Musical times tables tapes are also quite useful – children often learn the 'rhythm and rhyme' of a song quite quickly and therefore learn to recite and recall the facts.
It is really important that children are as confident with division facts as they are with multiplication facts.
Practice the idea of 'Family of facts' e.g.

if I know that 3 x 6 = 18..... I also know 6 x 3 = 18,
that 18 ÷ 3 = 6 and that 18 ÷ 6 = 3

Vocabulary

times multiply multiple of
lots of groups of divided by shared

Great computer programs:
Times table rock star

www.multiplication.com

https://www.topmarks.co.uk/maths-games/hit-the-button

www.mathszone.co.uk has lots of links to interactive games e.g., 'hit the button' – multiplication, division facts, number bonds to select

https://www.studyzone.tv/game275-code13fe7c386fa4ad7bb0ecdf05c8cec747

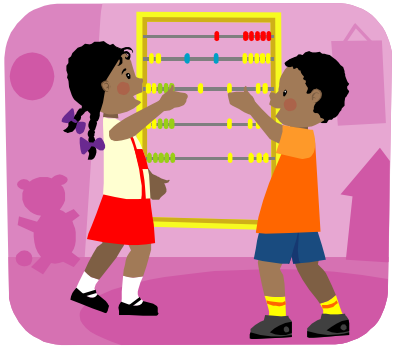
https://www.youtube.com/watch?v=9TSbNpPWIF4 12x table song

https://www.bbc.co.uk/teach/supermovers/ks2-maths-the-12-times-table-with-chirpy-cockerel/z7v7rj6 BBC Supermovers 12x table song

St Matthew's C.E. Primary Academy

Help your child to learn maths facts

Year 4



Parent's and carer's guide to support children with the 'Learning by Heart' programme

Autumn Term