BUILD MENTAL STRATEGIES FOR MULTIPLICATION AND DIVISION FACTS (based on the known strategies, arrays and regions)

1. The 2s facts

eg, 2 ones, 2 twos, 2 threes, 2 fours, ... 2 eights ....

DOUBLES, eg, "2 sevens ... double 7, 14"

Establish RELATED facts, eg, 7 twos, think 2 sevens

2. The 3s facts

eg, 3 ones, 3 twos, 3 threes, 3 fours, ... 3 eights, 3 nines ....

DOUBLES AND 1 MORE GROUP

eg, "3 eights ... double 8, 16 and 8 more, 20 ... 24"

Establish RELATED facts, eg, 8 threes, think 3 eights

3. The 4s facts

eg, 4 ones, 4 twos, 4 threes, 4 fours, ... 4 eights, 4 nines ....

DOUBLE DOUBLES

eg, "4 sixes ... double 6, 12, double 12, 24"

Establish RELATED facts, eg, 6 fours, think 4 sixes

4. The 5s facts

eg, ... 5 threes, 5 fours, 5 fives, 5 sixes .... 5 eights, 5 nines ....

RELATE TO TENS

eg, "5 eights is half of 10 eights, 40

Establish RELATED facts, eg, 8 fives, think 5 eights or 4 tens

5. The 9s facts

eg, ... 9 sixes, 9 sevens, 9 eights, 9 nines

TEN GROUPS LESS 1 GROUP

eg, 9 eights is less than 10 eights, it is 8 less, 72"

Establish RELATED facts using the same strategy,

eg, 8 nines is less than 8 tens it is 8 less, 72

6. The 1s and 0s facts

eg, 1 one, 1 two, 1 three, 1 four ... 1 of anything is anything

Establish RELATED facts, eg, 8 ones, think 1 eight

eg, 0 ones, 0 twos, 0 threes, 0 fours,... 0 anythings is nothing

Establish RELATED facts, eg, 9 zeros, think 0 nines

7. Deal with remaining facts

x	1	2	3	4	5	6	7	8	9
1									
2									
3									
4									
5									
6									
7									
8									
9									

6 sevens, 3 sevens and 3 sevens, 42

7 sevens, 49
SQUARE NUMBER

8 sixes, double 6, 12 double, double, 48

8. Consolidate and build to speed and accuracy via games such as 'Beat the Teacher' and 'Multiplication Toss'.

SO

So by knowing your 'squared numbers'
E.g. 7x7 means you can use this to work out 7x8
7x7 is 49 so add 7 (the original number) is 56 (7x8)
6x6 is 36 so add 6 (the original number) is 42 (6x7)

9 x tables strategy
- Finger strategy
- Use 10 x then take away (group) e.g. 8x10=80 take away 8 is 72 (8x9)

X	1	2	3	4	5	6	7	8	9
1	1 one 1	1 two 2	1 three 3	1 four 4	1 five 5	1 six 6	1 seven 7	1 eight 8	1 nine 9
2	2 ones 2	2 twos 4	2 threes 6	2 fours 8	2 fives 10	2 sixes 12	2 sevens 14	2 eights 16	2 nines 18
3	3 ones 3	3 twos 6	3 threes 9	3 fours 12	3 fives 15	3 sixes 18	3 sevens 21	3 eights 24	3 nines 27
4	4 ones 4	4 twos 8	4 threes 12	4 fours 16	4 fives 20	4 sixes 24	4 sevens 28	4 eights 32	4 nines 36
5	5 ones 5	5 twos 10	5 threes 15	5 fours 20	5 fives 25	5 sixes 30	5 sevens 35	5 eights 40	5 nines 45
6	6 ones 6	6 twos 12	6 threes 18	6 fours 24	6 fives 30	6 sixes 36	6 sevens 42	6 eights 48	6 nines 54
7	7 ones 7	7 twos 14	7 threes 21	7 fours 28	7 fives 35	7 sixes 42	7 sevens 49	7 eights 56	7 nines 63
8	8 ones 8	8 twos 16	8 threes 24	8 fours 32	8 fives 40	8 sixes 48	8 sevens 56	8 eights 64	8 nines 72
9	9 ones 9	9 twos 18	9 threes 27	9 fours 36	9 fives 45	9 sixes 54	9 sevens 63	9 eights 72	9 nines 81