Maths Workshop Year 3
Thursday 4th February 2016

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A Firm Foundation

The New Mathematics Curriculum

The New curriculum started in September 2014. Certain things have changed:

- There is a much greater emphasis on children being able to calculate using formal methods (without the use of calculators).
- There is a much greater focus on reasoning and applying: recognising different representations/different situations.
- Children are expected to deepen their understanding through using and applying (eg investigations).

The New Mathematics Curriculum

This has implications :

- To know multiplication tables to 12x12 by the end of Year 4.
- Apparatus will be used with older children before using visual and abstract recording. This supports them being able to understand concepts and enables them to recognise variation (different ways of seeing the same idea).
- Children will continue to be encouraged to explore using and applying (eg through investigations).

Year 3 Curriculum
Focusing on Number

ÅCompare & order numbers up to 1000 using < > =.
ÅRead & write all numbers to 1000 in digits and words.
ÅFind 10 or 100 more/less than a given number.
ÅCount from 0 in multiples of 4, 8, 50 and 100.
ÅRecall & use multiplication & division facts for 3, 4, 8 tables.
ÅRecognise place value of any 3-digit number.
ÅAdd and subtract: 3-digit nos and ones, 3-digit nos and tens, 3-digit nos and hundreds
ÅAdd and subtract: Numbers with up to 3-digits using written columnar method.
ÅEstimate and use inverse to check.
ÅMultiply: 2-digit by 1-digit
ÅCount up/down in tenths.
ÅCompare and order fractions with same denominator.
ÅAdd and subtract fractions with same denominator within thewhole.

Resources

- A range of resources is used to support and deepen understanding, presenting key ideas in a variety of ways.
  - Diennes (or base 10)
  - Numicon
  - Bead Strings
  - Counters
  - Digit cards
  - Arrow cards
  - Multilink

Assessment

- The new curriculum has removed levels and instead focuses on children reaching The National Standard at the end of each year.
- At the end of Year 6 this is known as being 'Secondary ready.'
- Day to day assessment is done to decide on next steps and inform future planning.
- Use of assessment booklets to record what the children can do.

Activity: Multiplication

Activity: Multiplication

Multiplication is:

- Repeated addition
- Commutative (order of numbers doesn't matter 3x4=4x3)
- Is the inverse of division

The answer to a multiplication calculation is called the product.

Multiplication is repeated addition

Eg 5 + 5 + 5 + 5 = 20

How many lots of 5 are there?

4

4 lots of 5

5 x 4 = 20

Multiplication is repeated addition

Eg 3 + 3 + 3 + 3 = 12

How many lots of 3 are there?

4

4 lots of 3

4x3=12

Multiplication as arrays in everyday life

We can represent multiplication as an array

Eg 4 x3=

4 columns of 3 or 3 rows of 4

Or

4 rows of 3 or 3 columns of 4

We can represent multiplication as an array

Eg 4x3=

x x x x

x x x x

x x x x

4 columns of 3 or 3 rows of 4

Or

x x x

x x x

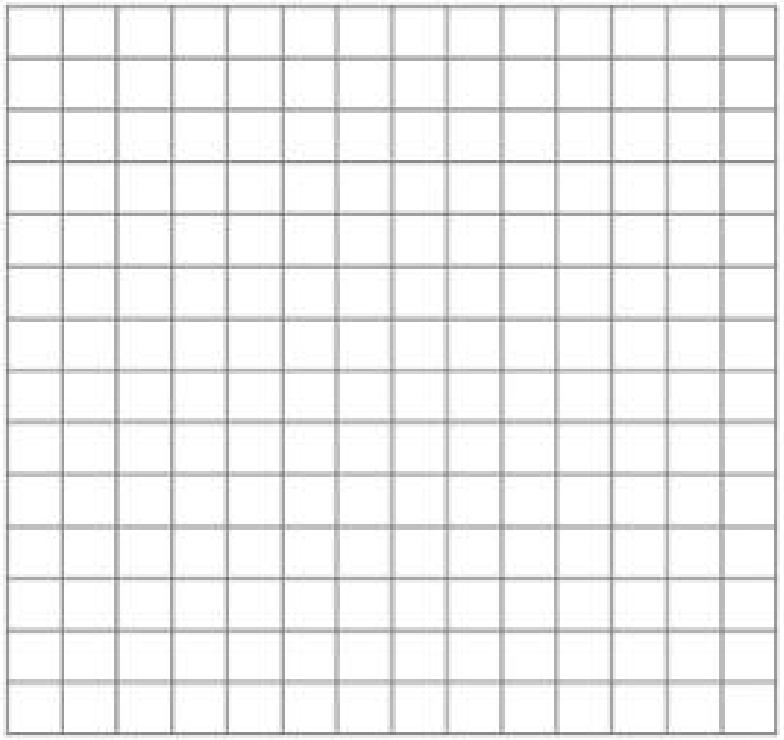
x x x

x x x

4 rows of 3 or 3 columns of 4

LO:I can multiply using the grid method

Eg: 12x4=



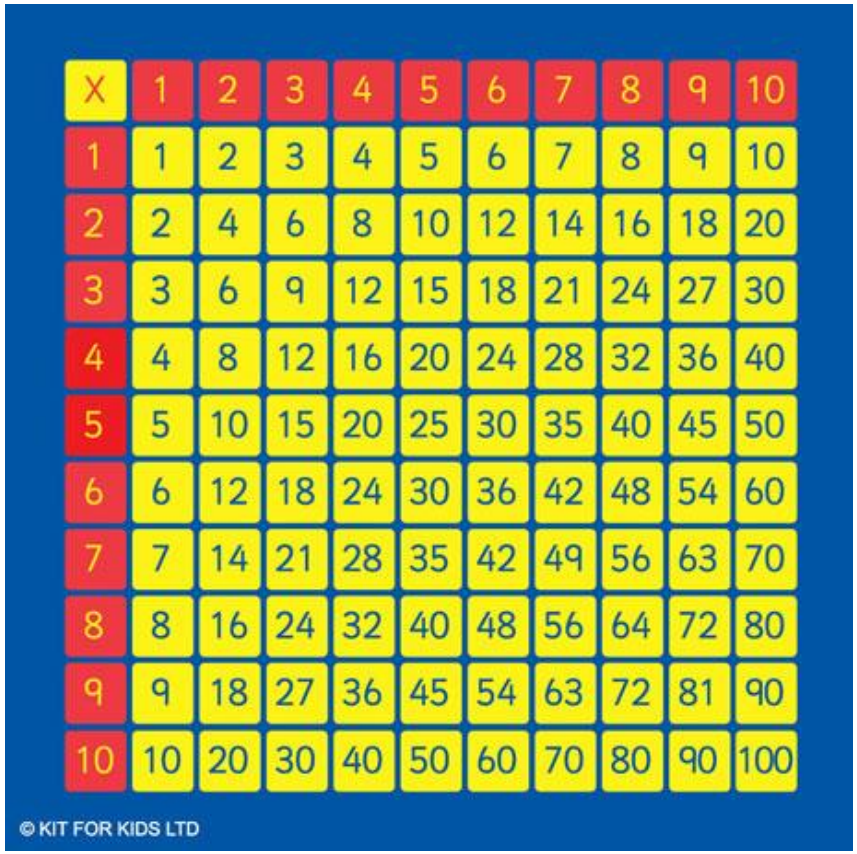
Multiplication – times tables

Knowledge of times tables is key to children succeeding in carrying out multiplication and division problems

- Chanting/singing
- Looking at the multiplication facts and associated division facts
- ICT Games eg: *http://www.topmarks.co.uk/maths-games/hit-the-button*

Multiplying using a multiplication square

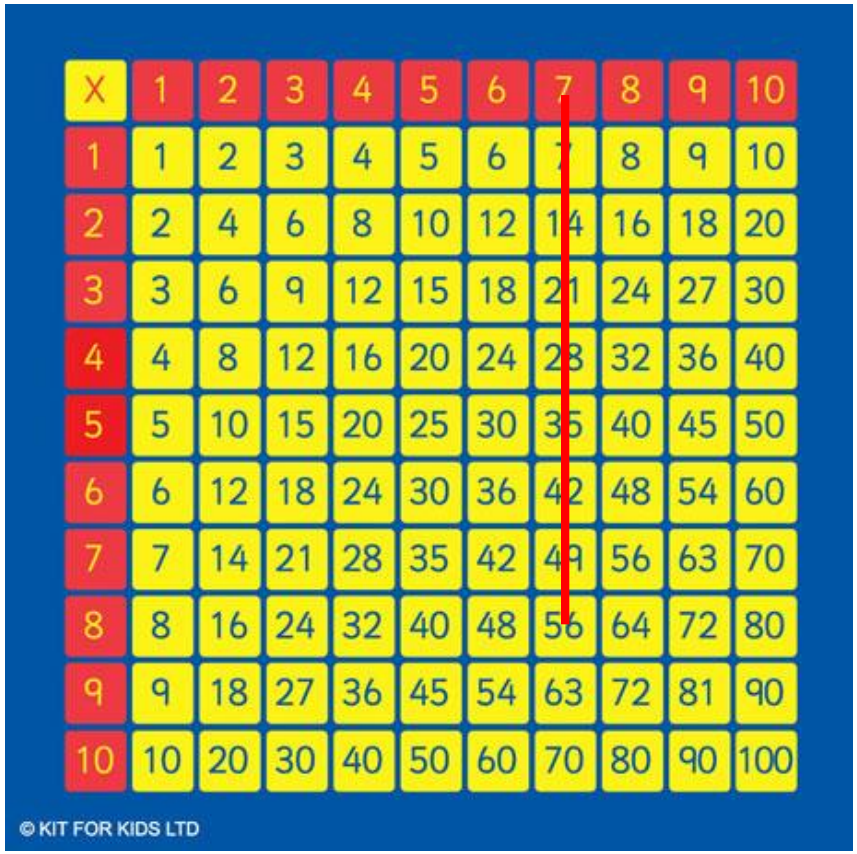
Å Eg 7x8=



X	1	2	3	4	5	6	7	8	9	10
1	1	2	3	4	5	6	7	8	9	10
2	2	4	6	8	10	12	14	16	18	20
3	3	6	9	12	15	18	21	24	27	30
4	4	8	12	16	20	24	28	32	36	40
5	5	10	15	20	25	30	35	40	45	50
6	6	12	18	24	30	36	42	48	54	60
7	7	14	21	28	35	42	49	56	63	70
8	8	16	24	32	40	48	56	64	72	80
9	9	18	27	36	45	54	63	72	81	90
10	10	20	30	40	50	60	70	80	90	100

Multiplying using a multiplication square

Å Eg 7x8=



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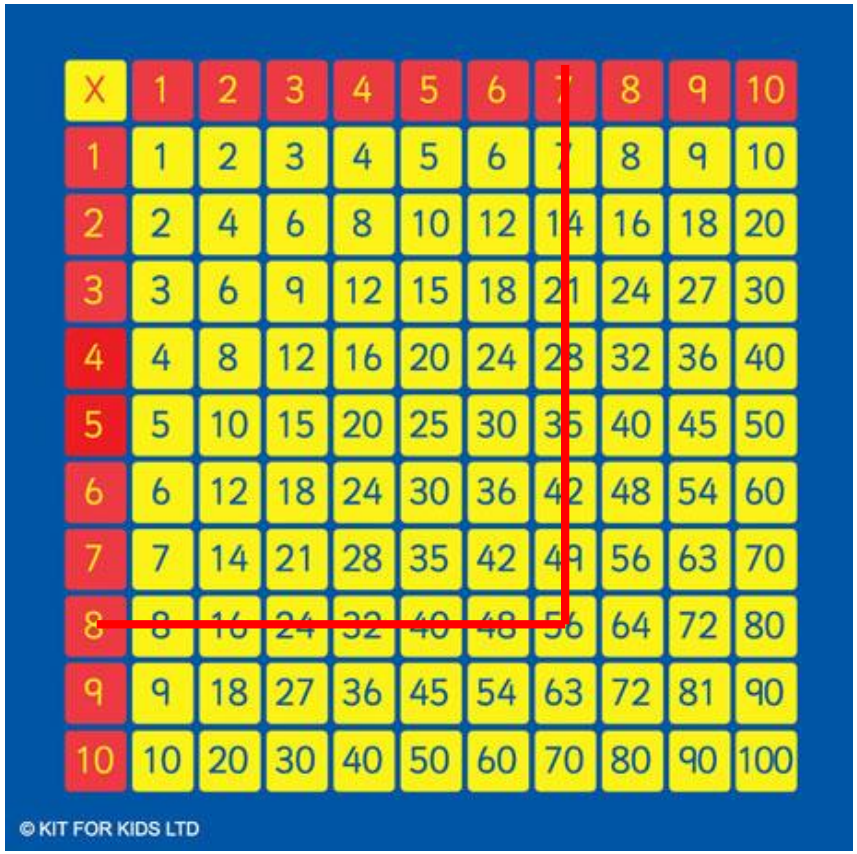

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3	3	6	9	12	15	18	21	24	27	30
4	4	8	12	16	20	24	28	32	36	40
5	5	10	15	20	25	30	35	40	45	50
6	6	12	18	24	30	36	42	48	54	60
7	7	14	21	28	35	42	49	56	63	70
8	8	16	24	32	40	48	56	64	72	80
9	9	18	27	36	45	54	63	72	81	90
10	10	20	30	40	50	60	70	80	90	100

Multiplication: Using & Applying

Completing a multiplication grid:

X	2	5
3		
4		

Multiplication: Using & Applying

Completing a multiplication grid:

X	2	5
3	6	15
4	8	20

Multiplication: Using & Applying

Put the numbers 2, 3, 4 and 5 into the grid so that the given products are correct

		6
		20
10	12	

Multiplication: Using & Applying

Put the numbers 2, 3, 4 and 5 into the grid so that the given products are correct

2	3	6
5	4	20
10	12	

Multiplication: Using & Applying

Put the numbers 5, 6, 7 and 8 into the grid so that the given products are correct

		30
		56
35	48	

Put the numbers 6, 7, 8 and 9 into the grid so that the given products are correct

		48
		63
42	72	

Multiplication: Using & Applying

Put the numbers 5, 6, 7 and 8 into the grid so that the given products are correct

5	6	30
7	8	56
35	48	

Put the numbers 6, 7, 8 and 9 into the grid so that the given products are correct

6	8	48
7	9	63
42	72	

Multiplication: Using & Applying

- Use all the numbers 1-9 to complete the grid.
- The products are of 3 numbers.
- You may not use each number more than once.

			15
			108
			224
144	8	315	

Multiplication: Using & Applying

- Use all the numbers 1-9 to complete the grid.
- The products are of 3 numbers.
- You may not use each number more than once.

3	1	5	15
6	2	9	108
8	4	7	224
144	8	315	

How you can help at home

- Support with learning multiplication tables: (revising 2,5 and 10) and learning 3, 4 and 8x tables
- Practise number bonds to all numbers up to 20
- Using money to pay
- (Bring children's attention to the clock and times/time intervals)
- Little and often – Try to keep it fun!