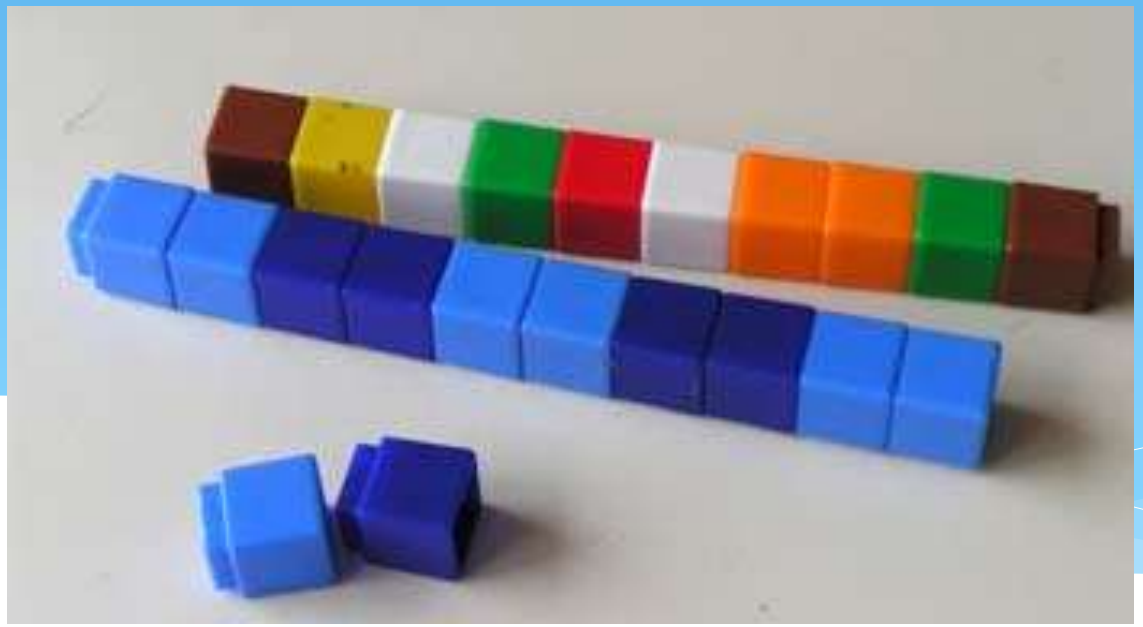
Maths at Holmesdale [presentation for parents]



Aims…

* Explain how we teach Maths across school
* Illustrate progression and development of skills
* Explore resources and strategies used in the classroom and outdoor learning environment
* Share with you some ideas of how you can help your child with their Maths at home
* Give you the opportunity to see Maths in action in the classrooms!

Maths in the Early Years

* Maths in the Early Years builds an important foundation for number work and problem solving in Key Stage 1.

* The children learn in lots of different ways, listening, watching, recording, playing, working in groups and most importantly discovering things for themselves. Our indoor and outdoor environment is designed to meet these needs.

* There are 2 aspects of mathematical understanding that start in Reception and continue throughout Key Stage 1

* Number
* Shape Space and Measures

Early Learning Goals…

Number:

Children count reliably with numbers from one to 20, place them in order and say which number is one more or one less than a given number. Using quantities and objects, they add and subtract two single-digit numbers and count on or back to find the answer. They solve problems, including doubling, halving and sharing.

Shape, Space & Measure:

Children use everyday language to talk about size, weight, capacity, position, distance, time and money to compare quantities and objects and to solve problems. They recognise, create and describe patterns. They explore characteristics of everyday objects and shapes and use mathematical language to describe them.

Numeracy through play and practical experiences

* Before we can embark on any kind of formal calculating there are vital practical processes the children need to experience.
* Role play- shops, maths market eg Bakers Shop / Garden Centre. Real life situations are the most productive.
* Work stations- often child initiated eg Time, money.
* Outdoor play- sand, water, games, coins
* Rhymes and songs- Daily
* Stories- Daily
* Games-Daily
* Numbers in the environment

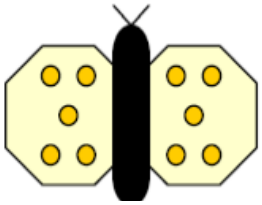
Calculating…

- Say numbers in order (up to and beyond 20)
- To count accurately using 1:1 correspondence
- Recognise numerals to 20 and beyond
- Develop problem solving skills
- Identify more and less (begin with 1 more then progress to 1 less)
- Begin to relate addition to combining two groups of objects and subtraction to 'taking away'

Calculation strategies

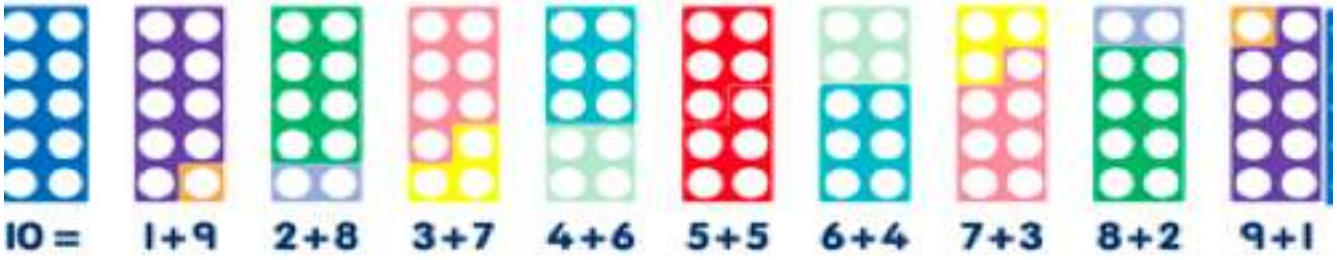
Begin to use the + and = signs to record mental calculations in a number sentence

6 + 4 = 10



5 + 5 = 10

Know doubles of numbers



Number bonds to 10!

* 0 to 10 are big strong men

* 1 and 9 are feeling fine

* 2 and 8 are never late

* 3 and 7 come from Devon

* 4 and 6 like to play tricks

* 5 and 5 come alive

* 6 and 4 hold open the door

* 7 and 3 visit for tea

* 8 and 2 are feeling blue

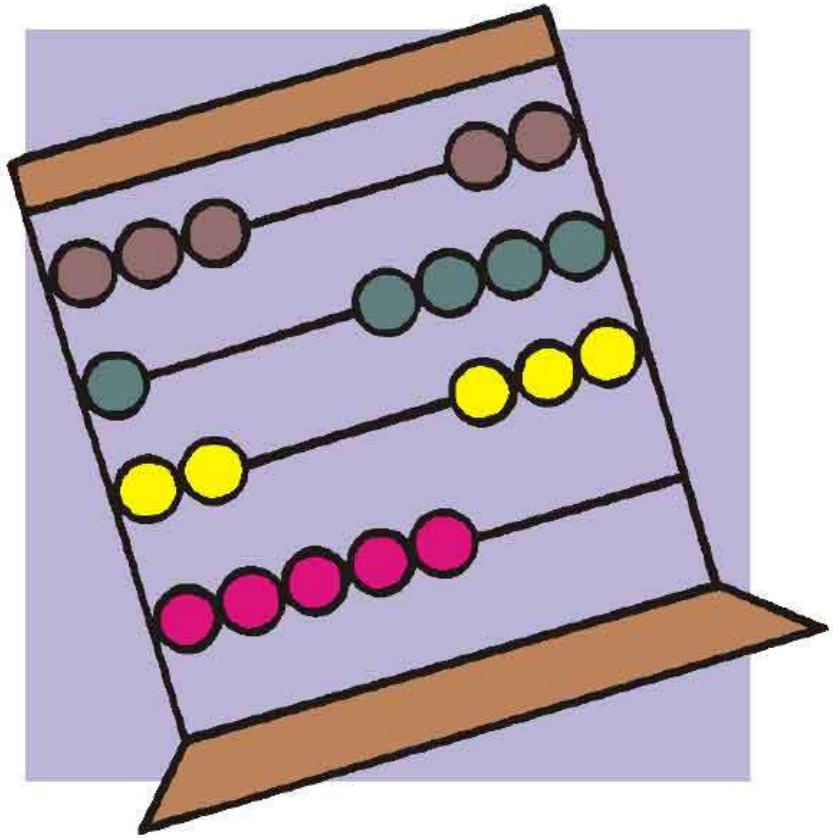
* 9 and 1 have just gone

* 10 and 0 are super heroes!!!!!!!

Problem solving and reasoning

- Use mathematical language – greater, heavier, longer, smaller, under, beside
- Identify patterns
- Identify and describe shapes
- Recognise and name coins and learn to use them in practical experiences
- Problem solving in real life situations whenever possible. Eg There are 10 children and only 5 biscuits…

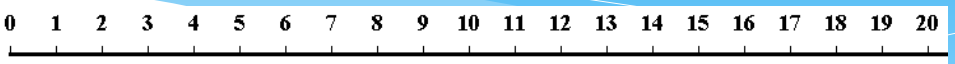
What happens in Key Stage One?

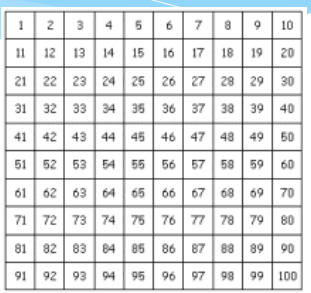


What do we teach in KS1 Maths?

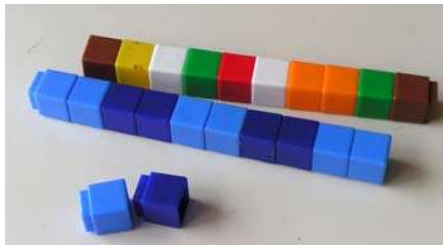
* Read & write up to 100 in numerals and words
* Number bonds from 10 and 20 (eg 7+3=10, 18+2= 20)
* Basic multiplication (2, 5, 10, 3, 4)
* Basic division
* Fractions ($\frac{1}{2}$, $\frac{1}{4}$, 1/3, 2/4 $\frac{3}{4}$) - of a length, shape, set of objects or quantity
* Addition and subtraction to 100 and beyond
* Place value (ones, tens and hundreds)
* Time (o'clock, half past, quarter to, quarter past, 5 minute intervals)
* Measurement (weight, length, capacity, temperature)
* Money (everyday money- calculating change)
* Problem solving
* Handling data (graphs, tables, sorting data)
* Shape and space

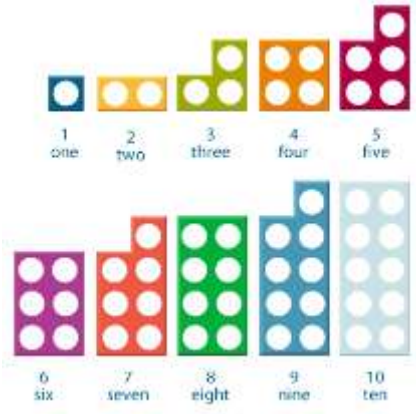
Resources include…





* Online games





Place Value

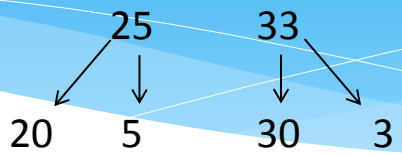
We use place value/arrow cards, base 10, unifix cubes and 100 squares to recognise the values of numbe
e.g. make the number 24

Arrow cards – make 24… then separate the 2 cards to see a 20 and a 4

Base 10 – make using the sticks of 10 and single cubes

100 square – recognising patterns and orders of numbers.

Adding 2x 2 digit numbers



E.g. 25 + 33= 58

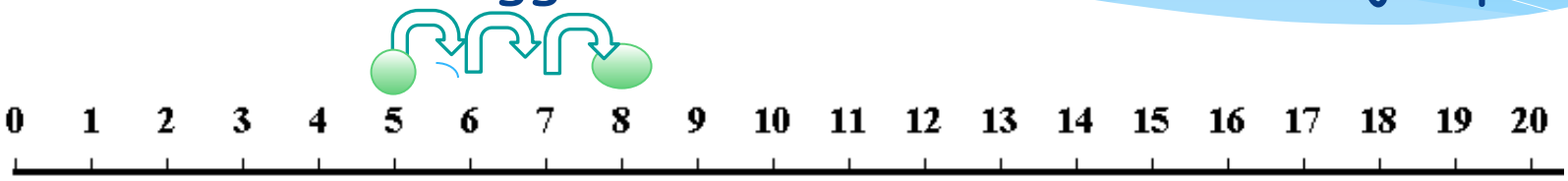
* Step 1: partition numbers
* Step 2: add up the tens (20 + 30 = 50)
* Step 3: add up the ones (5+ 3 = 8)
* Step 4: add both (50 + 8= 58)

E.g. 55 + 26 (tens - 50 + 20= 70) (ones - 5+6= 11)

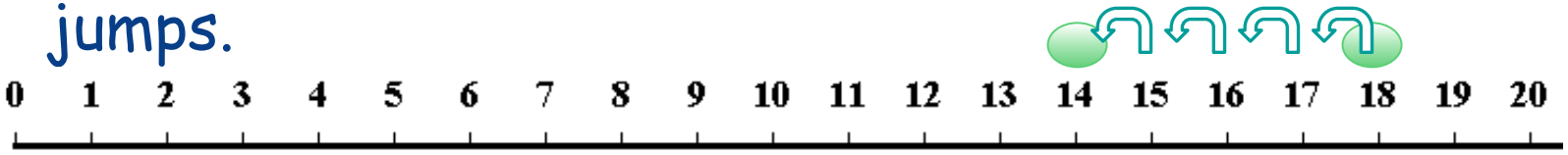
* 70 + 11… split the 11 into 10 and 1
* 70 + 10 = 80…. 80+1= 81

Using a Number Line

* Adding 5 + 3 = 8
* Start on the biggest number and count on in jumps.

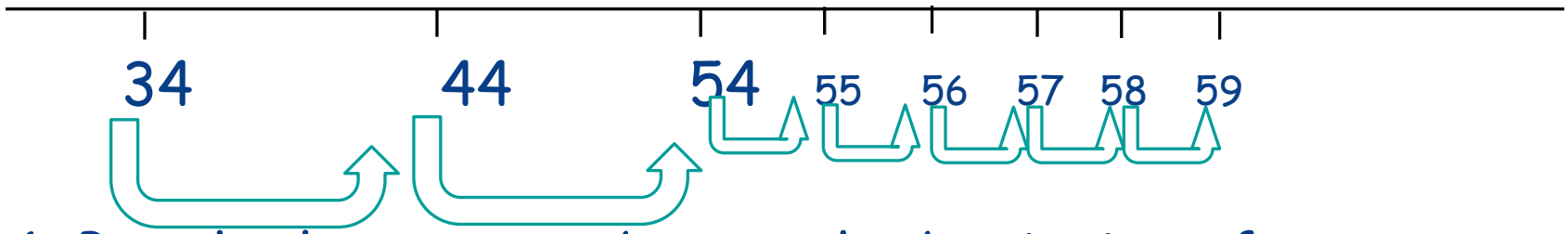


* Subtracting 18- 4=
* Start on the biggest number and count back in jumps.



Using a blank number line

* 34 + 25= 59



1: Put the largest number at the beginning of a number line

2: Partition the smallest number… 20 and 5

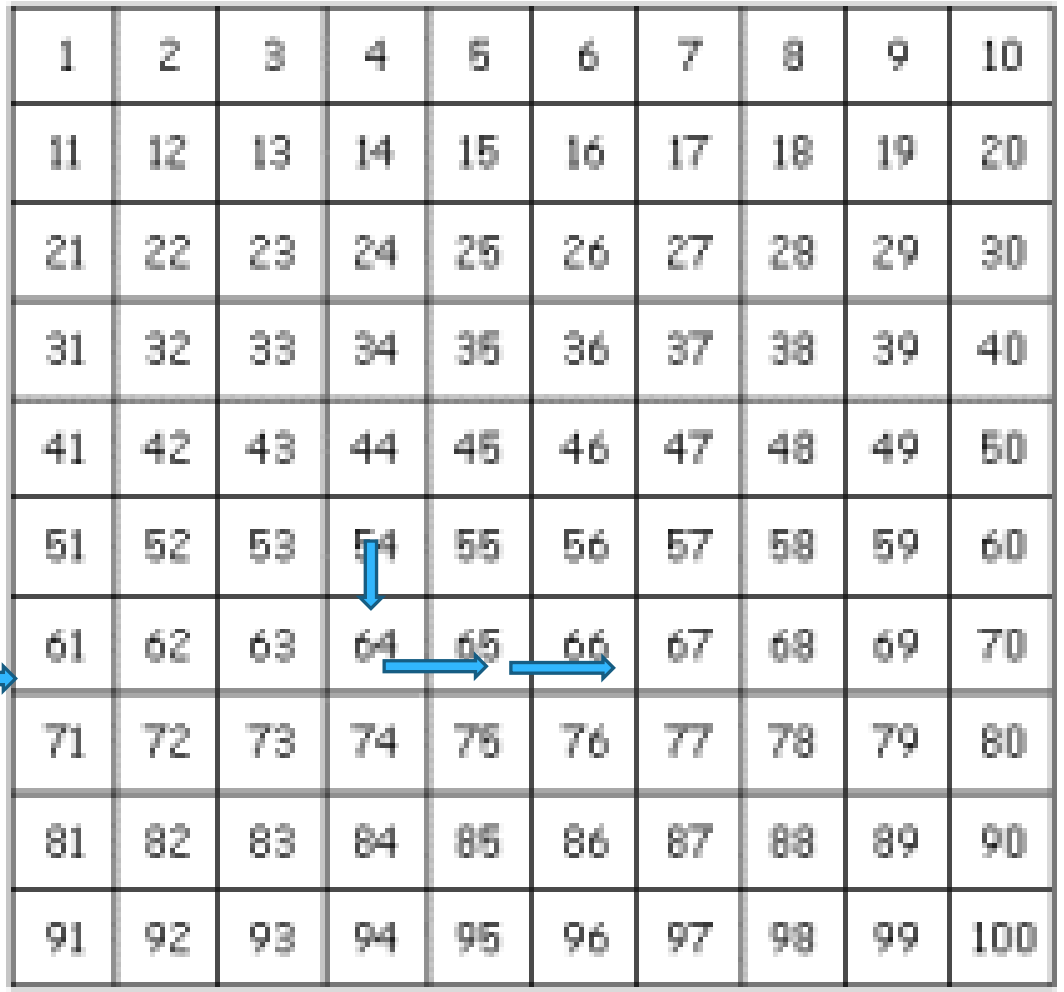
3: Add the 10s by jumping for each one (2)

4: Add the 1s by jumping for each one (5)

Addition and Subtraction with a number square

* Adding 12
* 54 +12= 66
* Step 1 :Partition the number (one 10, two ones) 10 & 2
* Step 2: add on the 10 (down 1)
* Step 3 add on the ones (right 2)

* Adding 10 go down 1
* Subtracting 10 up 1
* Adding 1 go right 1
* Subtracting 1 go left 1



1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Addition and Subtraction a with number square

Adding 9 :

25 + 9 = 34

Step 1: find 25 on number square

Step 2: simplify the equation (add 10 -1).

To add 10 simple go down one on the numbe

Grid then then take 1 to make 9 (go left 1 s

Down 1 left 1

Subtracting 9:

25 - 9= 16

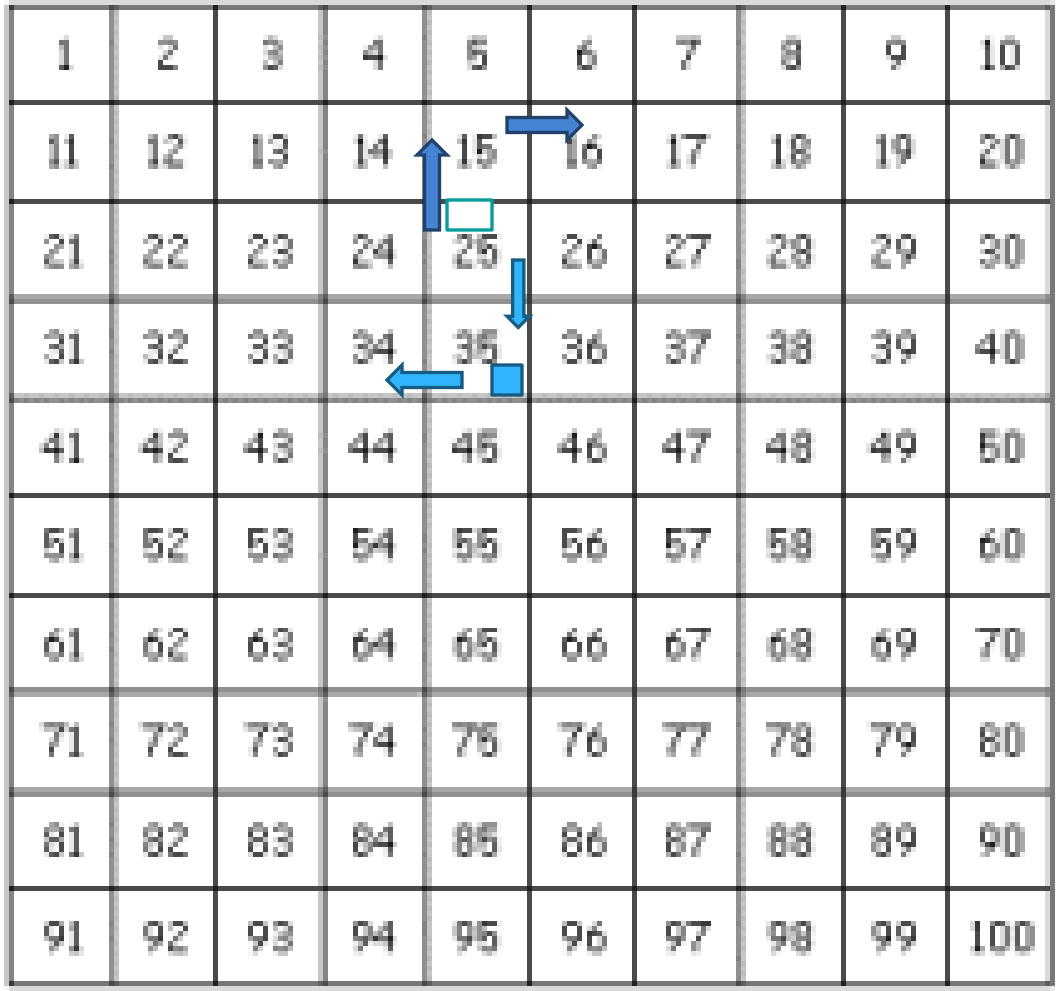
Step 1: find 25 on the number grid

Step 2: simplify the equation (take 10 +1)

Step 3: to take ten go up 1 then take 1 by g

Right 1.

Up 1 right 1



1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Using a 100 square for patterns and multiplication

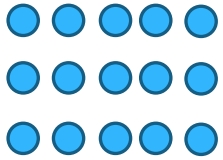
* Colour in the even numbers to recognise odd and even
* Learn the 2, 5 and 10 times table
* Variations for the number square
* Hiding numbers on a 100 square

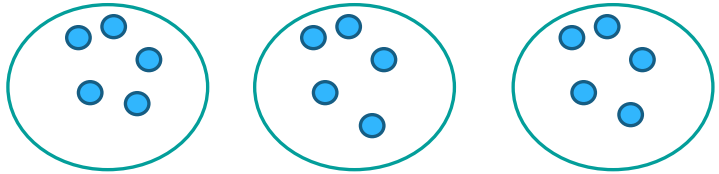
1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Multiplication in KS1

* First recognise that multiplication is repeated addition
* No. of lots how many per group total

  3 x 5 = 15
* Is the same as 3 lots of 5, 3 groups of 5 or 5 + 5 +5 = 15
* Use pictorial cues to represent a X sum.
* Encourage them to write the sum:





5 + 5 + 5

Arrays – recording groups in columns and rows

Practical maths

Making maths practical by using real materials.

E.g.

* Using coins

* Using food 

* Using measuring when cooking or making things

Online games

Children love games to engage their learning. Try some of these site links.

ict games

5-7 yrs Nash's Adventures

Starship

The Little Animals Activity Centre

Try apps on your tablet or mobile phone too!

How can you help…?

* Do little and often e.g. Count how many steps there are, how many items in a basket….now I've taken one out, how many knives and forks do we need for tea?
* Praise and always find a solution together instead of saying something is 'wrong'.
* Play lots of games-the children don't know they are learning! (Both computer based and old fashioned board games)
* Remember that maths should be FUN!
* Any worries or concerns…please just ask!