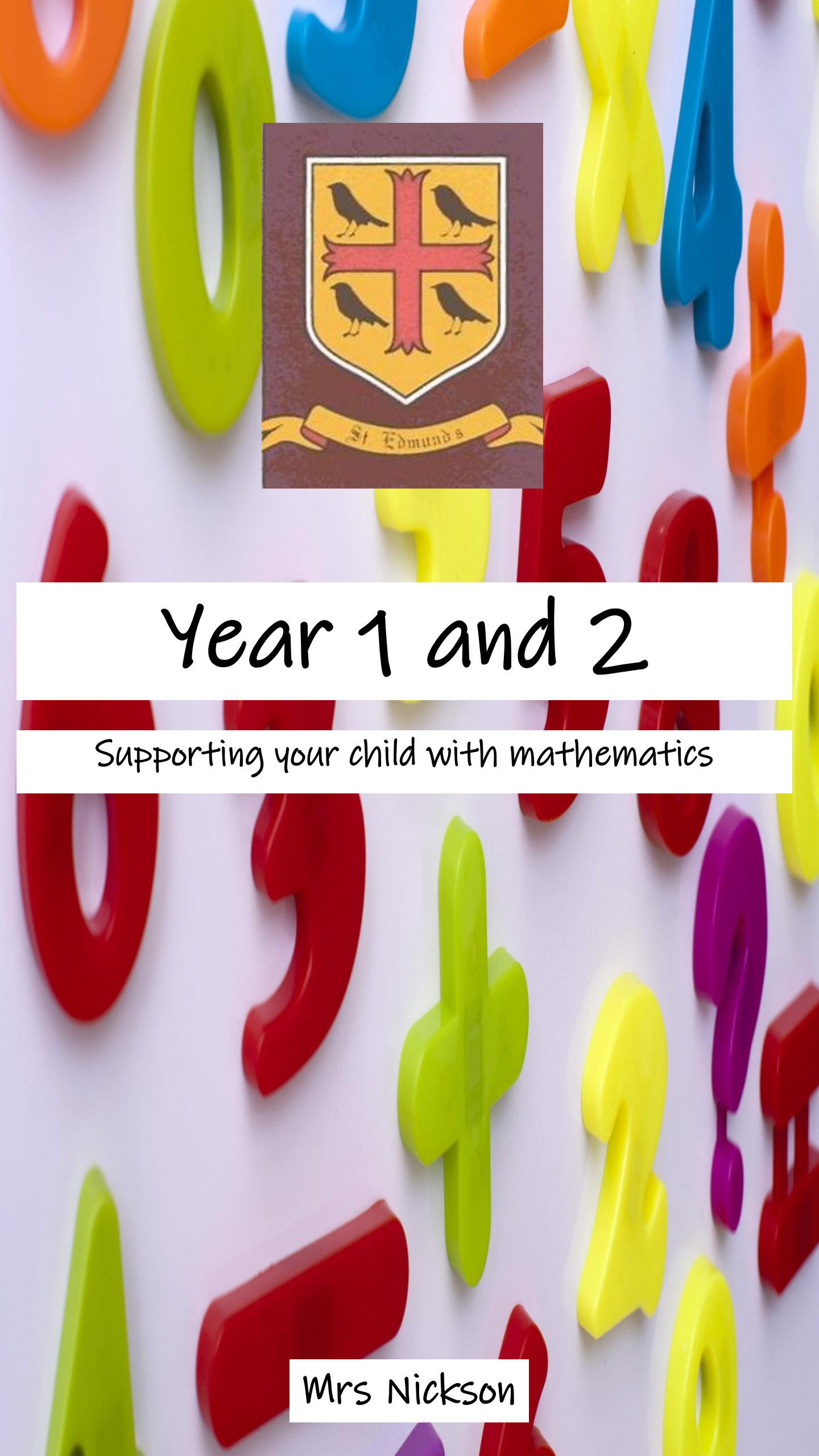


Year 1 and 2

Supporting your child with mathematics

Mrs Nickson

Contents

Introduction

In year 1 and 2, it's important for your child to get to grips with maths in a very practical, hands-on way. Working individually, as a class and in groups, they will be investigating, counting, playing number games and using everyday objects to help them solve problems and do simple calculations.

As they start to become more familiar with the language used in maths, they will be encouraged to talk about their methods for solving problems and presenting their results. Children will be given opportunities to deepen their learning by using their logic and reasoning skills in a range of real life contexts and problems.

This booklet will help you to understand what methods of calculation the children are learning in class. It will offer ideas of quick games or activities that you can do with your children at home to help consolidate their learning, developing your child's fluency in maths.

Please remember, I offer an open door policy and invite any questions you may have about your child's learning and progress. You can also email me with any questions.

Mrs Nickson

Number and Place Value

PUPILS IN Y1 WILL BE TAUGHT TO:

- count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number
- count, read and write numbers to 100 in numerals; count in multiples of twos, fives and tens
- given a number, identify one more and one less
- identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least
- read and write numbers from 1 to 20 in numerals and words.

PUPILS IN Y2 WILL BE TAUGHT TO:

- Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward or backward
- identify, represent and estimate numbers using different representations, including the number line and compare and order numbers from 0 up to 100; use <, > and = signs
- read and write numbers to at least 100 in numerals and in words
- recognise the place value of each digit in a two-digit number (tens, ones)
- use place value and number facts to solve problems

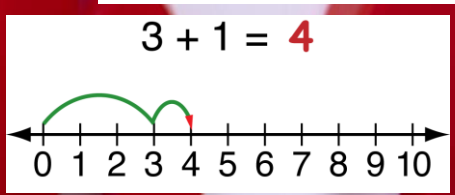
Number and Place Value Cont.....

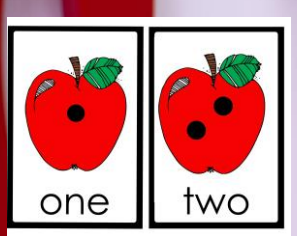
WHAT IS PLACE VALUE?

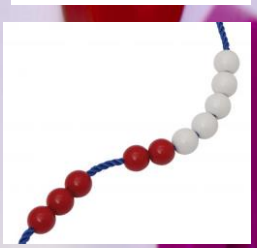
- A good understanding of place value (the value of each digit in a number) is vital in early maths.

- Place value is the value of each digit in a number. It means understanding that 32 is made up of 30 and 2, rather than 3 and 2. We will concentrate on 2 digit numbers - the tens and ones in year one.

Pupils will use a range of resources to identify, represent and estimate numbers, including the number line, pictorial representations, cubes and other counting objects, Numicon, counting bead strings, etc.







SECRET NUMBERS

- Write the numbers 0 to 20 on a sheet of paper.
- Ask your child secretly to chose a number on the paper. Then ask them some questions to find out what the number is, e.g.
- Is it less than 10?
- Is it between 10 and 20?
- Does it have a 5 in it?
- Is it odd? They may only answer yes or no.
- One you have guessed the number, it is your turn to choose a number. Your child asks the questions. Easier: use numbers to 10. Extend: numbers up to 100.

Addition and Subtraction

PUPILS IN Y1 WILL BE TAUGHT TO:

- read, write and interpret mathematical statements involving addition (+), subtraction (–) and equals (=) signs
- represent and use number bonds and related subtraction facts within 20
- add and subtract one-digit and two-digit numbers to 20, including zero
- solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = – 9.

PUPILS IN Y2 WILL BE TAUGHT TO:

- show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot
- recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100
- add and subtract numbers using concrete objects, pictorial representations, and mentally, including:
  - a two-digit number and ones
  - a two-digit number and tens
  - two two-digit numbers
- adding three one-digit numbers
- recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.
- solve problems with addition and subtraction:
  - using concrete objects and pictorial

representations, including those involving numbers, quantities and measures

- applying their increasing knowledge of mental and written methods
- *solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change* (copied from Measurement)

Addition and Subtraction cont....

HOW WILL THEY DO IT?

In year 1 and 2, children will be using lots of practical methods of counting e.g. using cubes, beads, counters, almost anything you can think of!
They begin by understanding that 'add' means to combine two groups of objects and subtract means 'taking away' objects.
Children then move onto counting on and counting back. This can be done using number lines, where they start at a number and count on by making jumps along the number line in 1's.

VOCABULARY

Addition

add, more, plus, make, sum, total, altogether, score, double, one more, two more, ... ten more, how many more to make...? how many more is... than...? how much more is...?

Subtraction

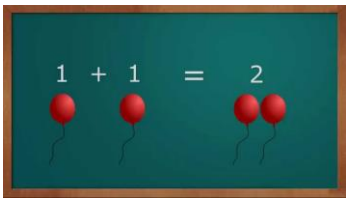
subtract, take (away), minus, leave, how many are left/left over? how many have gone? one less, two less, ten less... how many fewer is... than...? how much less is...?

Addition

PUPILS WILL BE TAUGHT TO:

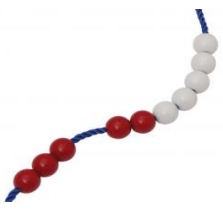
Your child will engage with the process of addition using a number of different strategies which build-upon each other:

Using images for addition:



Using blocks, counters or Numicon for counting on or addition:

Using bead strings to count on:

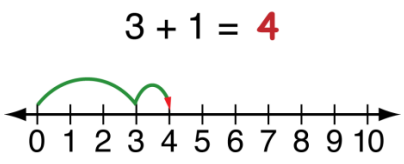


Using number lines for addition:

3 + 1

Start at 3, jump on in 'ones' one time.

So the answer is 4



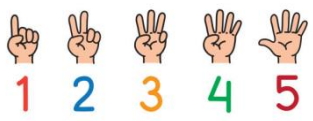
ADDING CIRCLES

Each of you should draw four circles on your piece of paper.

- Write a different number between 2 and 12 in each circle.
- Roll the dice twice. Add the two numbers.
- If the total is one of the numbers in your circles then you may cross it out.
- The first person to cross out all four circles wins. You can make this game harder by choosing bigger numbers and rolling more dice.

Addition cont....

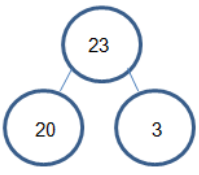
Adding in my head Your child will begin to develop their mental maths. For example; 7 + 3 'put 7 in my head and count on 3 more with my fingers ...8, 9, 10'



100 square Your child will become familiar with the use of the hundred square as a tool for adding

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

Partitioning: 23 → 20 + 3 (23 splits to 20 and 3)



Arrow Cards are used in school to partition:

7 people are on the bus. 4 more get on at the next stop. How many people are on the bus now?

Encourage your child to recognise that they are trying to find the equivalent to 7+4 in order to make the calculation balance.
Children could use dots or tally marks to represent objects (quicker than drawing pictures). They could record this is as 11=7+4.

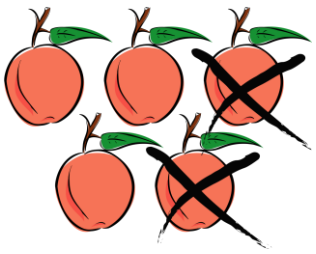
IIIIIII OOOO

Subtraction

PUPILS WILL BE TAUGHT TO:

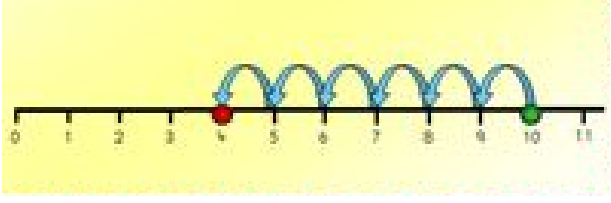
As with addition, your child will engage with the process of subtraction using a number of different strategies which build-upon each other:

Subtraction as take away using objects:
5 – 2 = 3



Your child will physically move equipment to practically work out subtraction before moving onto drawing and crossing out.

Using a number line: to count back Using a number line for 10 – 6 (starting with a printed number line, then moving to a blank one)

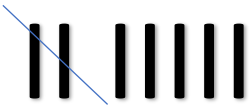


Start at 10, jump back in 'ones' six times 10-6 = 4

Mum baked 7 cakes.
I ate 2.
How many were left?

Children could use dots or tally marks to represent objects (quicker than drawing pictures).

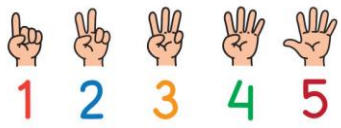
They could record this is as 5=7-2.



activity

Subtraction cont....

Taking away in my head: Your child will begin to develop their mental maths. For example: 7 – 3 becomes 'put seven in my head and count back 3 on my fingers...6, 5, 4



100 square: Your child will become familiar with the use of a hundred square as a tool for subtracting numbers

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

Subtraction as finding the difference.

9-6 = 3

Difference is 3

DICE GAME

You need a 1–6 dice, paper and pencil.

- Take turns.
- Choose a number between 1 and 10 and write it down.
- Throw the dice and say the dice number.
- Work out the difference between the chosen number and the dice number, e.g. if you wrote down a 2 and the dice shows 5, the difference is 3.

You could also draw a number line to help your child to see the difference between the two numbers.

activity

Multiplication

PUPILS IN Y1 WILL BE TAUGHT TO:

In year 1 the children concentrate on the X2, x5 x10 multiplication facts with the emphasis being very much on the tables as repeated addition. This will be more at the end of Year 1.
As with addition and subtraction strategies your child will use the physical manipulation of objects as a starting point before moving on to using images to aid understanding

PUPILS IN Y2 WILL BE TAUGHT TO:

In year 2 the children continue to recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers
They also learn to *count in steps of 2, 3, and 5 from 0, and in tens from any number, forward or backward*

- show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot
- calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs

FOODLIPLICATION

Use small food items like raisins and grapes to up the stakes when practising grouping and arrays.
Lay out a group of raisins (or whatever you prefer) and ask your child to group them into twos and threes before they eat them all.
This is a simple but effective way to encourage your child to think about the multiplication work they are doing, and they get the benefit of having an immediate tasty treat at the end!

activity

Multiplication

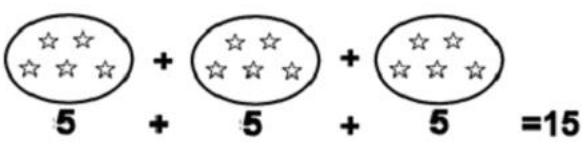
PUPILS WILL BE TAUGHT TO:

Sequences – counting aloud in jumps of 2, 5 or 10 to develop the understanding of multiplication as repeated addition:

2, 4, 6, 8, 10 ....
5, 10, 15, 20, 25 ....
10, 20, 30, 40 ....

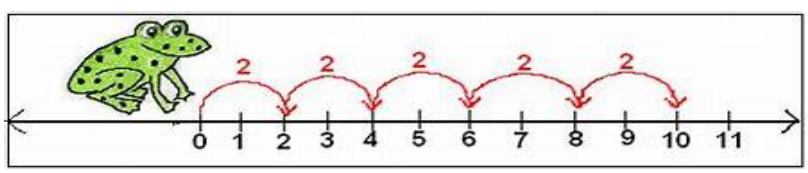
Repeated addition using apparatus (counters, beads, etc), followed by diagrams when ready.

3 x 5



Using a number line for jumps of 2, 5, 10

+2 +2 +2 +2 +2



5 x 2 5 x 2 = 10

Arrays are useful models for multiplication which can be used in a variety of ways.

An array is formed by arranging a set of objects into rows and columns. Each column must contain the same number of objects as the other columns, and each row must have the same number as the other rows.

The following array, could be used to represent the number sentence 3 x 4 = 12, 4 x 3 =12, 3 + 3 + 3 + 3 = 12 and 4 + 4 + 4 =12.

Multiplication cont....

PUPILS WILL BE TAUGHT TO:

Using a 100 square Your child will colour numbers on a hundred square or smaller number grid to aid the recognition of patterns in the multiplication tables.

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

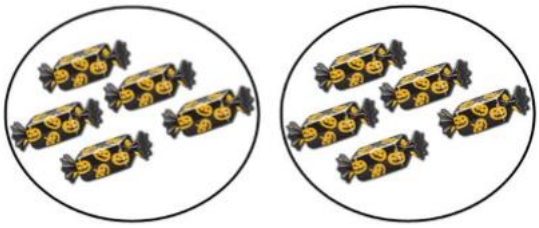
VOCABULARY

Lots of, groups of, multiply, times, add, steps of, jumps of

Division

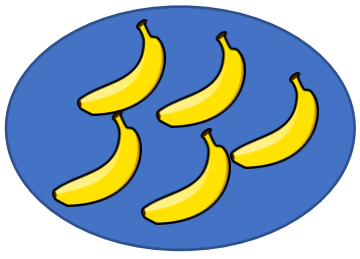
PUPILS WILL BE TAUGHT TO:

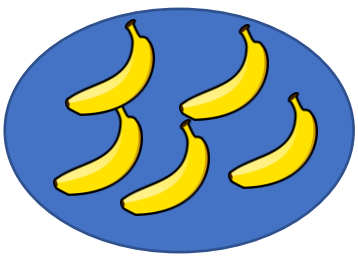
As with all areas of calculation in Year 1 and 2, division begins with the physical moving of counters, etc before progressing to the use of diagrams and pictures. Sharing Share 10 sweets between 2 children



Each child has 5 sweets.

How many groups of 5 bananas could you make with 10 bananas?





= 2 groups

10 bananas gives two groups of 5 bananas.

Your child will also begin to look at how division is the inverse of multiplication. e.g. 4x2= 8 8÷4=2

VOCABULARY

share, share equally, groups of, divide, how many groups?

Useful Websites

http://www.mathletics.co.uk

http://www.mathsisfun.com/links/curriculum-year-1.html

http://www.snappymaths.com

http://www.topmarks.co.uk/Interactive.aspx?cat=8

https://uk.ixl.com/math

http://urbrainy.com/maths/year-1-age-5-6

https://www.gov.uk/ (National Curriculum can be downloaded here)

http://www.theschoolrun.com

THE IMPORTANT BIT...

Give your child lots of praise and encouragement and make maths fun and engaging.

Discuss how we use maths in everyday life: money, time, shopping and playing.