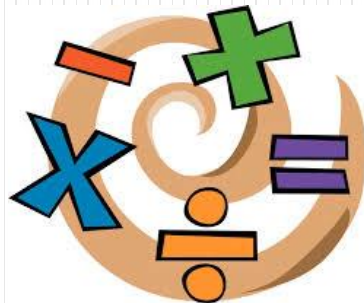


# Numeracy Workshop

## Year 2



# Introduction



- **The New Numeracy Curriculum**

- Higher expectation
  - Emphasis on 'Number Facts'
  - Written methods introduced earlier

- **Numeracy Setting at Bessemer**

- Year 2 - Autumn to Summer

- **Numeracy Toolboxes**

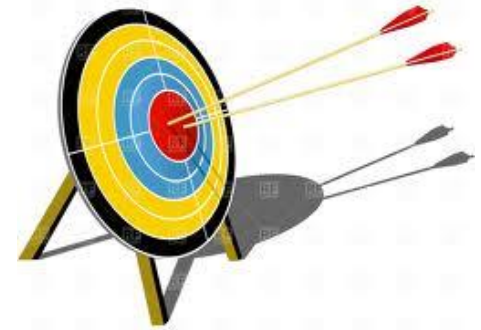
- New system to promote problem solving by using set tools such as beads, number-lines, 100 square that are appropriate for your child's level

- **Maths Vocabulary**

- A focus has been put on developing children's Maths language so that they can understand and use Maths words at an earlier age and they understand the specific language of Mathematics to help them solve problems

# Aims

- **Outline Main Changes in New Curriculum**
- **Discuss Progression in Calculation**
- **Demonstrate Taught Strategies in Year 2**
- **Tools – how to use them**
- **Supporting Children at Home**
- **National Curriculum Levels & Expectation**



# New Curriculum – Greater Expectation

## Foundation

- Read, Write and Order Numbers to 20
- Double & Halve Numbers
- Add & Subtract 2 single digit numbers (6 + 2, 9 – 3 etc...)

## Year 1

- Read, Write and Order Numbers to 100
- Recognise the fractions  $\frac{1}{2}$ ,  $\frac{1}{4}$  and  $\frac{3}{4}$
- Add & Subtract 2-digit and 1-digit numbers
- Solve problems using 4 operations ( +, -, x and ÷ ) using objects

## Year 2

- Recognise fractions  $\frac{1}{3}$  and  $\frac{2}{3}$
- Add and Subtract 2 numbers up to 2-digits use column addition method
- Count in steps of 2, 3, 5 and 10
- Know **Number bonds to 20, Doubles & Halves, Add & Subtract mentally, 2, 3, 5 and 10 times table**

# Progression in Calculation

**Addition**

$$4 + 2$$

Objects/Counters

**Addition**

$$7 + 4$$

Number-line

**Addition**

$$\begin{array}{r} 11 + 8 \\ 26 + 12 \\ 100 \text{ Square} \\ \text{Dienes} \end{array}$$

**Subtraction**

$$5 - 3$$

Objects/Counters

**Subtraction**

$$17 - 4$$

Number-line

**Subtraction**

$$\begin{array}{r} 23 - 6 \\ 35 - 12 \\ 100 \text{ Square} \\ \text{Dienes} \end{array}$$

**Multiplication**

**&**

**Division**

**Sharing &  
Doubling**

**X 2 or  $\div$  2**

**Repeated  
Addition/  
Subtraction**

**2, 5, 10, 3 x table**

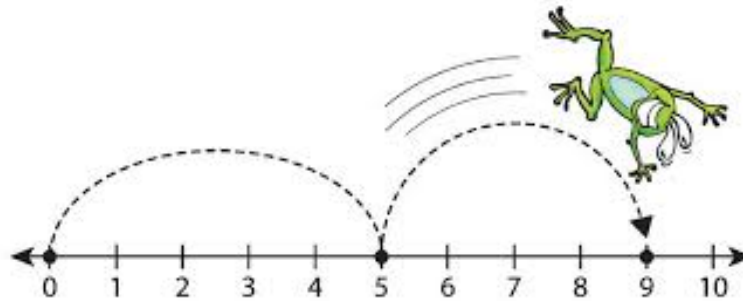
# Taught Strategies



- Some of the strategies taught at school are.....



head and fingers



counting on and back



Read **U**nderstand **C**hoose  
Solve **A**nswer **C**heck

$$\begin{array}{r} 22 + \\ \underline{12} = \\ 34 \end{array}$$

column  
addition

# 100 Square

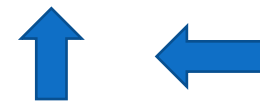
- How we use it

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



$$12 + 4 =$$

$$15 + 11 =$$

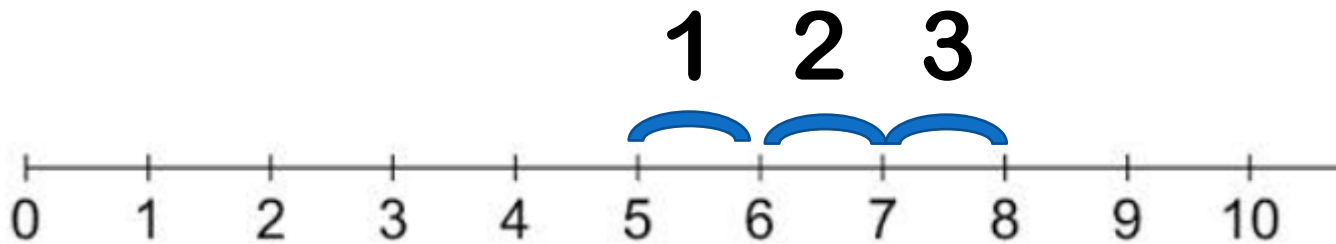


$$15 - 3 =$$

$$23 - 12 =$$

# Number line

- How we use it



$$5 + 3 = 8$$



# Tools

- Tools that will be used in the classroom toolboxes are....

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

100 square



Number Line



Number Facts



cubes/dienes

	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

Multiplication Grid



# Supporting Maths at Home



- **Door Numbers** – **Odd & even numbers, place value**
- **Playing Board Games** – **Place value and ordering**
- **Baking** – **Weighing, capacity, reading scales**
- **Clocks & Time** – **Encourage children to wear a watch & tell the time**
- **Shopping & Working Out ‘Change’** - **Word problems, +, -, x, ÷**
- **Food for Counting & Fractions** – **Pasta shapes, pizza/cake fractions**
- **Purses & Wallets** – **Emptying your purse for children to count coins**
- **Rubik’s Cubes, Puzzles & Toys** – **Get presents that challenge children**
- **Internet Activities** - [www.ictgames.com](http://www.ictgames.com) , [www.kenttrustweb.org.uk](http://www.kenttrustweb.org.uk),  
[www.woodlands-junior.kent.sch.uk](http://www.woodlands-junior.kent.sch.uk) , [www.kidsmathgamesonline.com](http://www.kidsmathgamesonline.com) , [www.bbc.co.uk](http://www.bbc.co.uk)

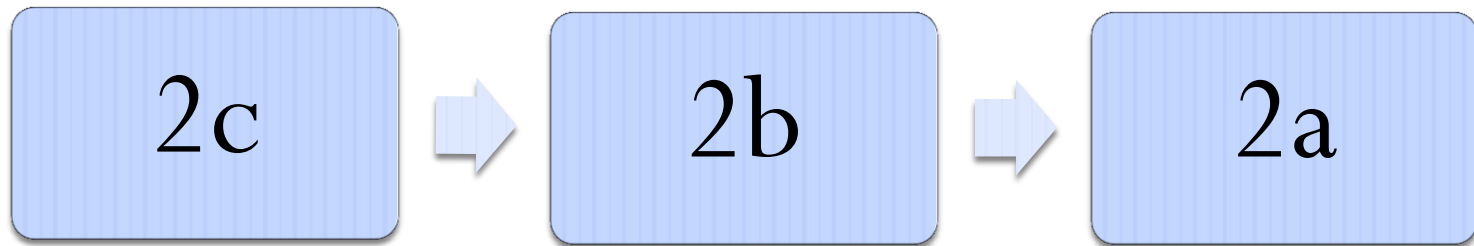
# 100 Square Games



- **Total of 10:** Find pairs of numbers on the hundred square that total 10. How many different pairs can you find? How could you organise your answers so that you know you have found all the possible ways? Extend to totals to 20, 50 and 100.
- **Favourite numbers:** Choose your favourite number from the hundred square. Make up 3 statements about it e.g. it is greater than 30, it is less than 70, it is not in the 10's but it is in the 5's. Can someone else guess your number correctly? If not, let them ask a question to help them.
- **Find the number:** Say a number to your child. Ask them to find it on the hundred square and cover it with a counter. Ask them how they found it. Play to improve. Can you find it quicker next time? How did you do it? Keep playing to improve strategy and explain.
- **Odds and Evens:** Game for 2 players, one person chooses to be 'evens' and one 'odds.' Each player rolls a dice and if the 'odd' player lands on an odd number they cross out an odd number on the square, if not they pass. Next the 'even' player rolls a dice and if they land on an even number they cross out even number, if not they pass. Winner is first to have all numbers crossed out.

# National Curriculum Level

## Year 2



**Previous National  
Expected Level  
(End of Year)**

**Current National  
Expected Level  
(End of Year)**

# What Can a 2b/2a Child Do?

- Read, Write and Count to 100 and beyond
- Write all numbers correctly
- Use a number line and a 100 Square correctly
- Know 2D & 3D shapes – oblong, pentagon, cube, cuboid
- Count in 2s, 5s, 10s and 3s up and back from 0
- Add & Subtract accurately - 2 digit to/from a 2 digit number
- Know Number Facts – doubles, halves to 10, number pairs to 100, times tables (2, 5 and 10)
- Solve word problems for all 4 symbols of operation – Jack has 32p and Jane has 21p. How much money do they have altogether?
- Fractions of shapes and groups of objects  
 $\frac{1}{2}$   $\frac{1}{4}$   $\frac{3}{4}$  etc.