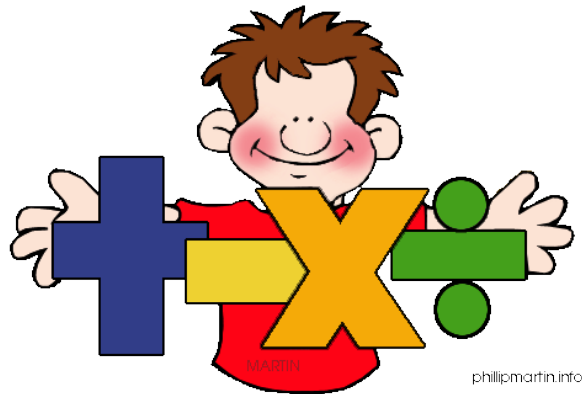


Welcome to HCIS Maths Evening

October 5th 2016



Expectations by the end of Year 1

You will receive Maths Curriculum overview to take home.

- Number and Place Value
- 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 two's, five's and tens.
- Given a number count 1 more and 1 less.
- Identify and represent numbers using objects and pictures including a number line.
- Use mathematical language such as : equal to, more than, less than, most, least.
- Addition and Subtraction
- 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 and two digit numbers to 20, including zero.
- Solve one step problems that involve addition, subtraction. These may be presented as missing number problems.



Expectations by the end of Year 1

Multiplication and Division

- Solve one step problems involving multiplication and division. Children may use objects, pictures or arrays to support them with this.

Fractions

- Recognise, find and name a half as one of two equal parts of an object, shape or quantity.
- Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity

Measures

- Compare, describe and solve practical problems for:
- Height , length, mass, weight, capacity, volume,
- Time.
- Measure and begin to record the following:
- Lengths / height
- Mass / weight
- Capacity / volume
- Time in hours, minutes and seconds
- Recognise and know the value of different denominations of coins and notes.
- Sequence events in chronological order
- Recognise and use language relating to dates, including days of the week, weeks, months and years.
- Tell the time to the nearest hour and half past the hour.



Expectations by the end of Year 1

Shape

- Recognise and name 2D and 3D shapes including:
- 2D – rectangles squares, circles and triangles
- 3D – cuboids, cubes, pyramids and spheres

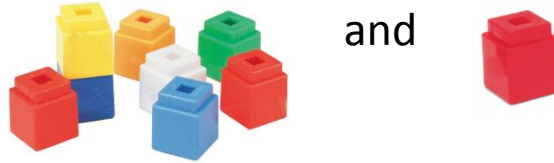
Position and Direction

- Describe position , direction and movement including whole, half, quarter and three quarter turns.



TEACHING MATHS IN YEAR 1

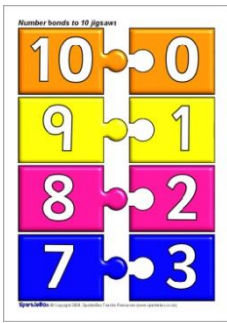
Maths in Year one is very practical using lots of resources but the children are starting to record e.g.



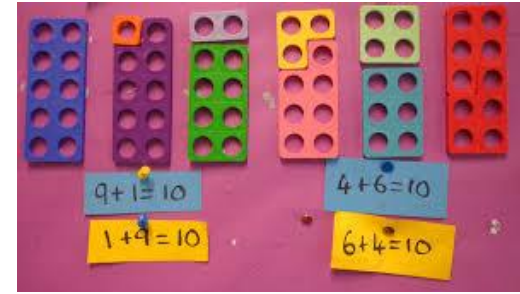
$$8+1=9$$

We also focus on counting in steps of 2, 5 and 10 and number bonds. Once these are learnt they can then use these number facts to derive other maths e.g. if $7+3=10$ $17+3=20$ or 5,10,15, 20, is $4 \times 5=20$. These key skills are also applied to real life problem solving e.g. money.

If I want to buy a sweet that costs 12p, what coins could I use?



Number Bonds



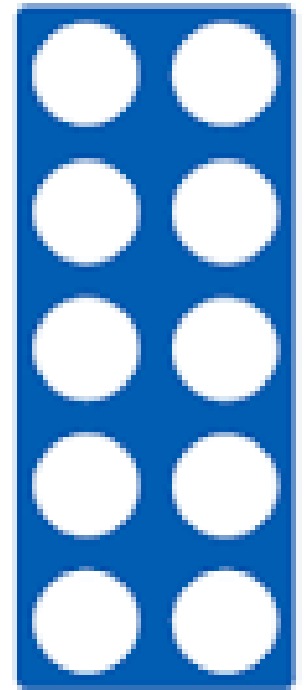
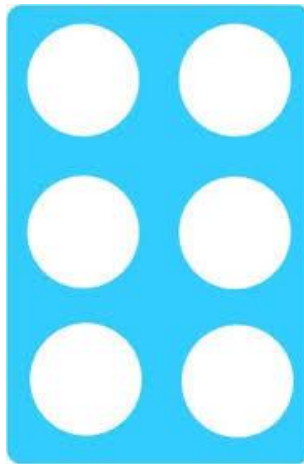
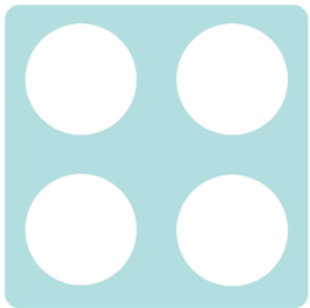
- Why are they so important?
- They are a powerful building blocks for number.
E.g. if the children know that $7+3=10$ then they know $17+3=20$ and $70+30=100$.
- This will help them in all areas of maths.

Your turn....in 30 seconds, write as many number bonds to 10 as you can. Challenge – now to 100!

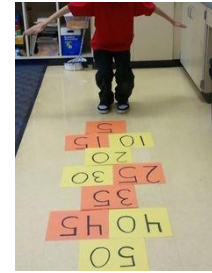


Number bonds game

- **Your turn** - Hold up your piece of Numicon and see if you can find someone who has the other piece that makes 10.



Step Counting



- Each child needs to be able to count on and back in 1's, 2's, 5's and 10's.
- This will help with all areas of maths.
- They need to count on from any multiple e.g.
- 4, 6, 8, or 35, 40, 45 or 100, 90, 80 etc....
- This can be practised anywhere at any time e.g. in the car, in the bath or walking to school.

Your turn....tens aerobics!





Addition

Counting on using objects

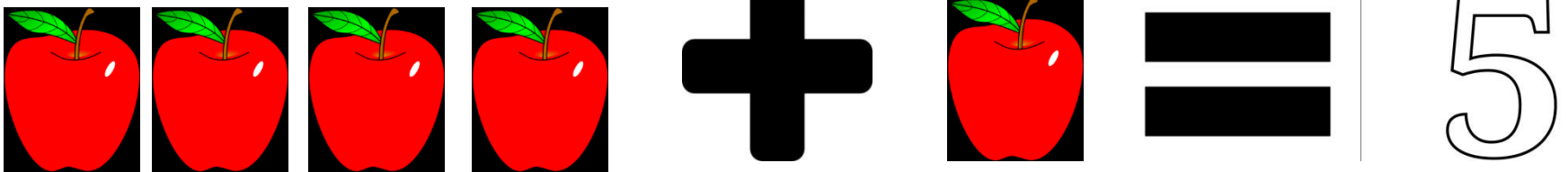
Counting on using number line / tracks

Counting on using a hundred square

Blank number line (bridging)

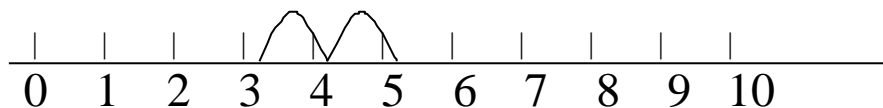
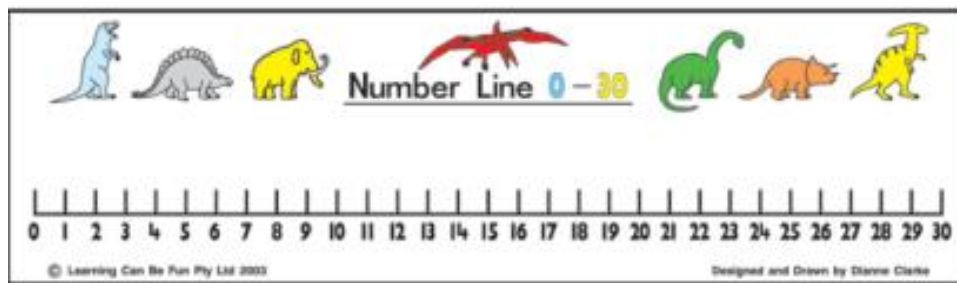
Partitioning

Column addition

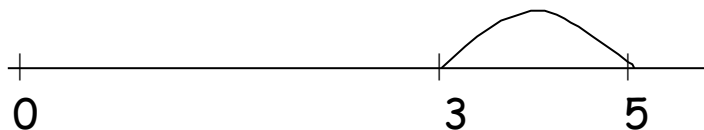


Addition :

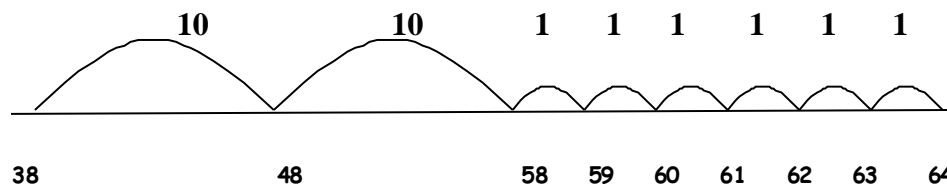
$$3 + 2 =$$



and 2 more



$$38 + 26$$



Your turn....drawing a blank number line on your white board, show the addition using partitioning

$$56 + 35!$$

Addition - using the 100 square

- Now it's your turn!



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

- What patterns can you see?
- Let's start adding 10 on the 100 square!
- http://www.primarygames.co.uk/pg2/splat/splat_sq100.html

Addition : partitioning

- $34 + 45 =$

$$30 + 40 = 70$$

$$4 + 5 = 9$$

$$= 70 + 9$$

$$= 79$$

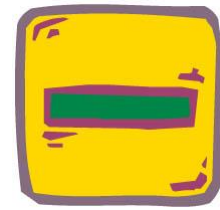


Your turn! Write on the mini whiteboards and show the partitioning for –

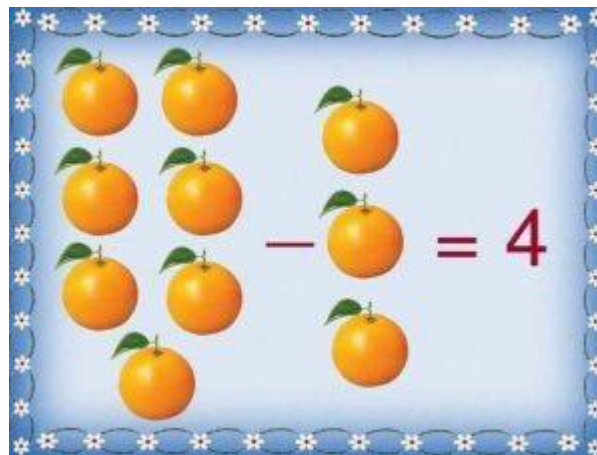
$$56 + 31 =$$



Subtraction

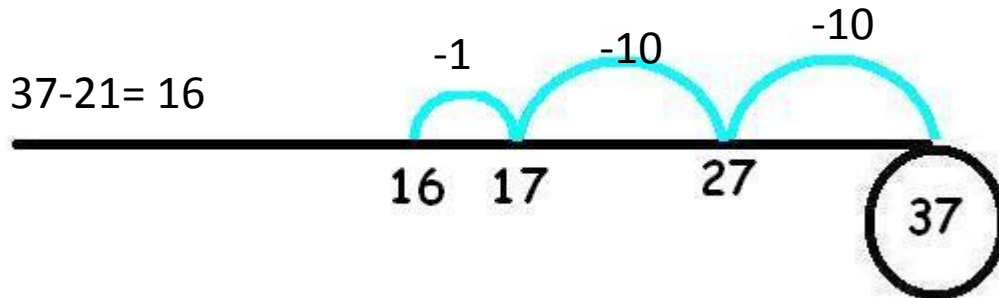
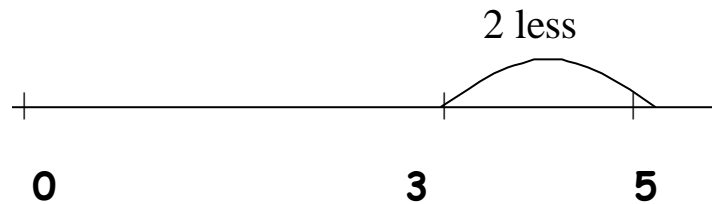
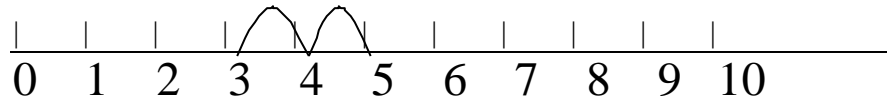


- Counting back using objects
- Counting back using a number line
- Counting back using a hundred square
- Blank number line
- Partitioning



Subtraction: Number Lines

$$5 - 2 =$$



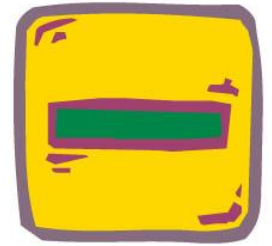
Counting back

Your turn - drawing a blank number line on your white board, show the subtraction using partitioning

66 - 21!



Subtraction games



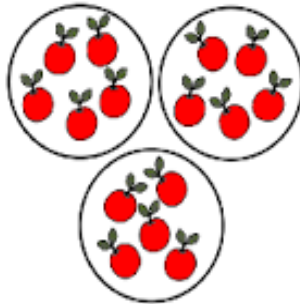
- **Your turn** – Can you work out $20-8$ using the large number tiles?



Multiplication



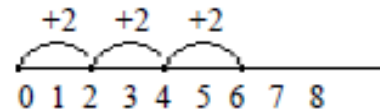
- Doubles – objects / bead string
- Counting in steps of 2,5,10
- Counting objects
- Pictures
- Number lines
- Times tables
- Arrays



There are 3 equal groups of 5.

Multiplication learned as
repeat addition

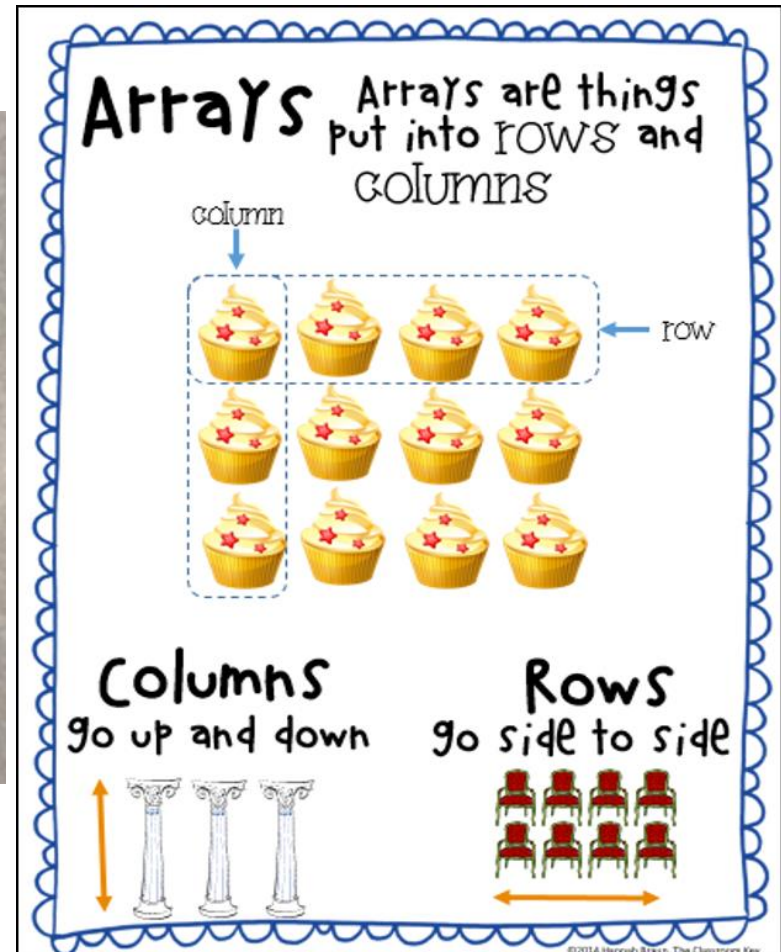
$$3 \times 2 = 2 + 2 + 2$$



$$3 \times 2 = 2 + 2 + 2$$

$$5 + 5 + 5 = 15 \quad \text{becomes} \quad 3 \times 5 = 15$$

Multiplication X



Division

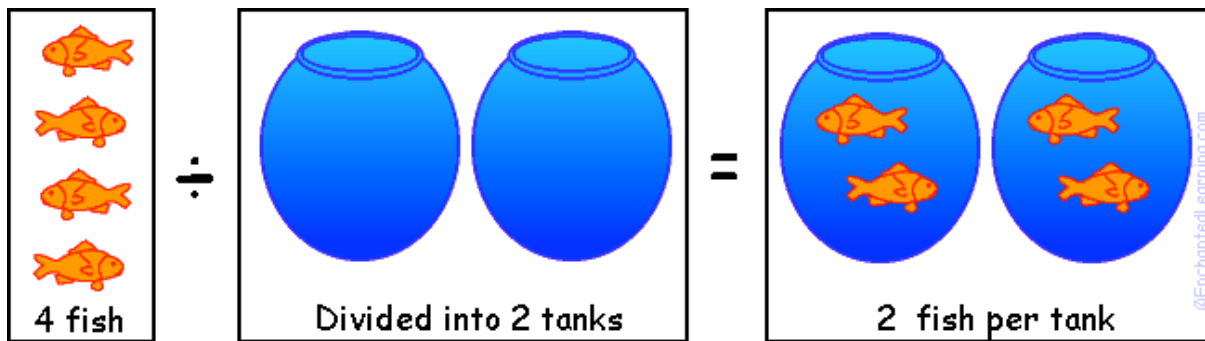
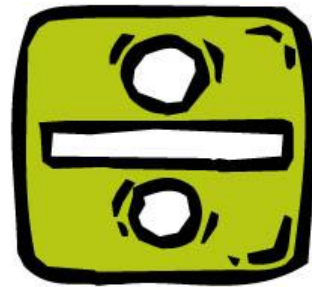


- Halving
- Sorting hoops and objects
- Pictures
- Related times tables facts

Share 12 cookies equally among 3 children.
How many cookies will each child get?



Division



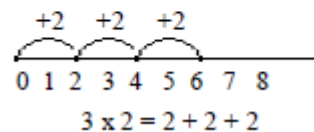
Use arrays.



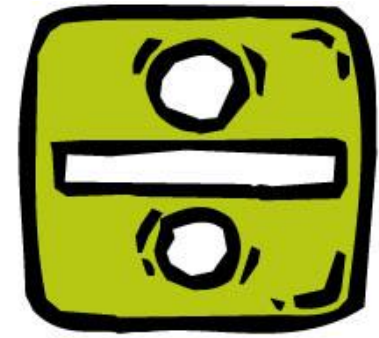
Multiplication learned as

repeat addition

$$3 \times 2 = 2 + 2 + 2$$



Division



- I have 10 cakes to share between 5 friends.
How many cakes does each friend get?



- **Your turn** - Draw on your whiteboard and show me how.



Problem Solving



- This is a great way to use all the skills we have learnt.
- We use the RUCSAC method.

Word problems?

No problem!



Read!

Read the question and underline the important bits.



Understand!

Think about it and write the number sentence(s) you will need.



Choose!

Choose how you will work it out.



Solve!

Solve the problem – work it out.



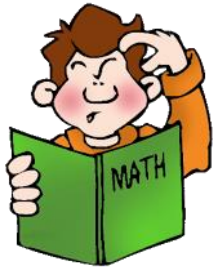
Answer!

Have you answered the question fully?



Check!

IS IT LIKELY?? Check it and double underline your final answer.



Example problem



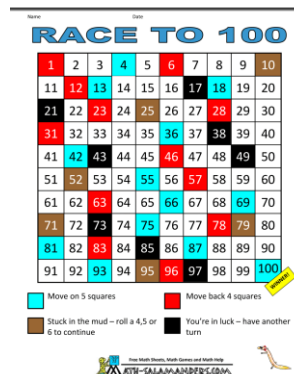
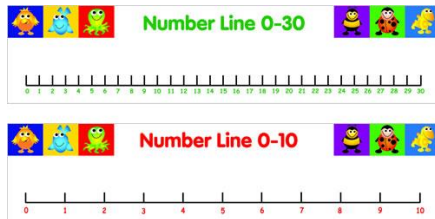
- Tom has 6 apples and 4 oranges how much fruit altogether?
1. Underline the important words.
 2. Decide on a method e.g. adding
 3. $6+4=10$
 4. How can I check this? I know $6+3=9$ so $6+4=10$.



Resources

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	CLEAR
81	82	83	84	85	86	87	88	89	90	PRINT
91	92	93	94	95	96	97	98	99	100	MAIN

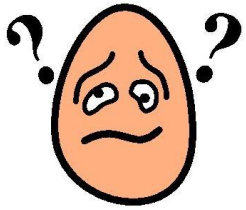
- A variety of resources are used in the teaching of maths.



Why does Numicon work?

- It is very visual.
- It is colourful and pleasing to the eye.
- The holes are finger sized.
- It gives a concrete image of number.
- It is fun!
- It can used for all four operations.





How can I help my child?



1. Help them with their homework.
2. Practice counting with them in 2's, 5's and 10's on and back.
3. Use maths in everyday life e.g. shopping, laying the table.
4. Play games e.g. snakes and ladders, frustration.
5. Buy a maths kit!!!



Maths Kits

- These are available to buy for £5.00.
- These are used as a way to encourage children to use maths at home.
- This contains two 1-6 dice, 30 counters, step counting cards in tens, fives and twos, 0-30/0-10 wipe able number line, whiteboard and pen, 100 square, pack of playing cards, wipe able clock face, wipe able 100 square, maths mat and a termly booklet with ideas and websites.

- Please feel free to look at the resources and games at the tables.
- Any questions, do grab us!



Useful Websites

- www.sparklebox.co.uk
- www.twinkl.co.uk
- www.ictgames.com
- www.bbc.co.uk/bitesize/ks1/maths
- www.topmarks.co.uk/maths