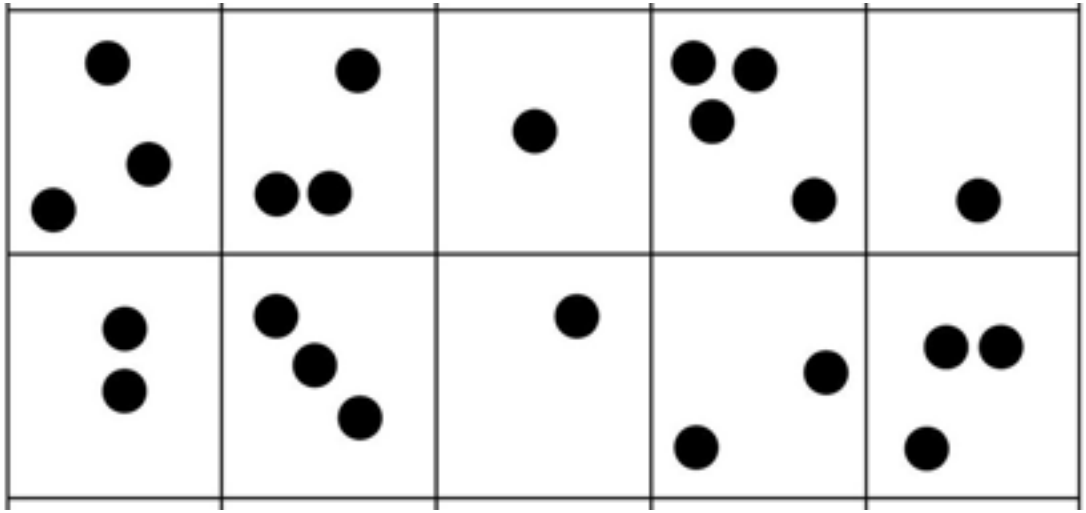
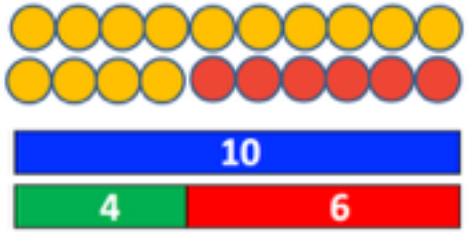
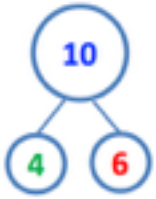
A maths mastery curriculum:

- High expectations for every child
- Fewer topics, greater depth
- Number sense and place value come first
- Problem solving is central
- Challenge is provided through increased depth rather than new content
- Objects and pictures before number and letters

Using a variety of models to embed understanding







Whole

Part - Part

4 + 6 = 10

6 + 4 = 10

10 = 4 + 6

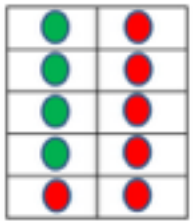
10 = 6 + 4

10 – 6 = 4

10 – 4 = 6

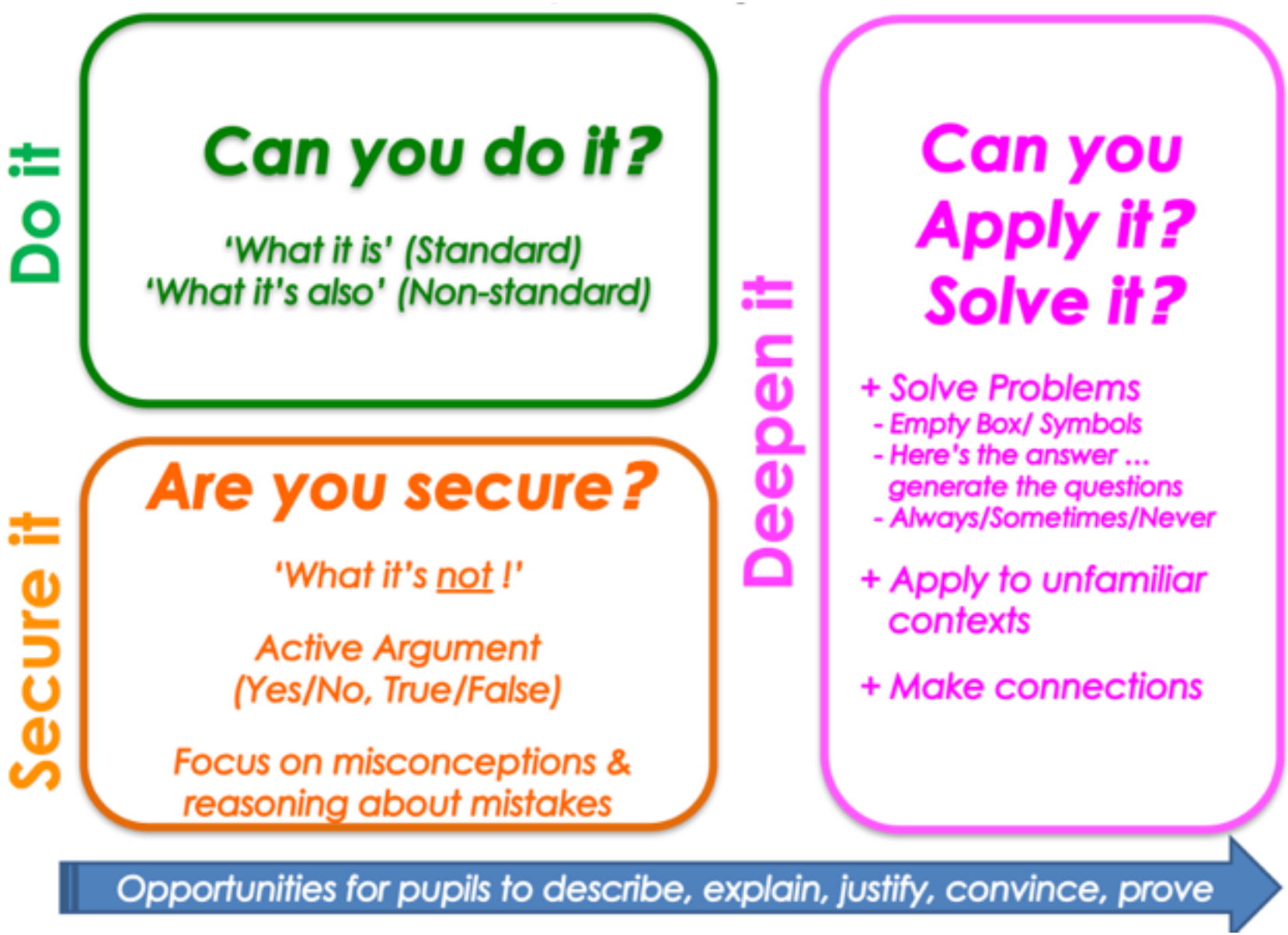
4 = 10 - 6

6 = 10 – 4



Magic 10!

Using a teaching sequence which embeds understanding



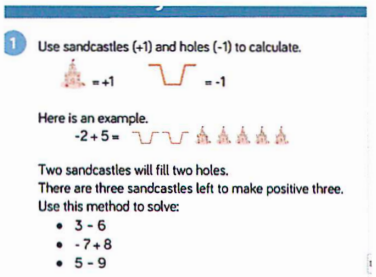
12th and 13th September 2018 Year 6 Place Value **I can** count forwards and backwards through zero. Find intervals across zero.

Do it

Wednesday 12th September
Starter: Order a positive and negative numberline.

Are negative numbers whole numbers?
Why do the numbers on a number line mirror each other from
0?
Why does positive 1 add negative 1 equal 0?
Draw me a picture to show 5 subtract

Secure it


1 Use sandcastles (+1) and holes (-1) to calculate.

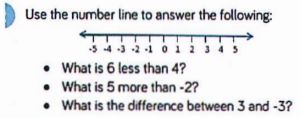
= +1 = -1

Here is an example.

-2 + 5 =

Two sandcastles will fill two holes.
There are three sandcastles left to make positive three.
Use this method to solve:

- 3 - 6
- -7 + 8
- 5 - 9


Use the number line to answer the following:

-5 -4 -3 -2 -1 0 1 2 3 4 5

- What is 6 less than 4?
- What is 5 more than -2?
- What is the difference between 3 and -3?

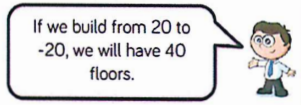
Activities on the WB for all to work through. Differentiate by using smaller and bigger numbers.
Follow up with negative numbers crossword and game Tug of war.

Deepen it

Thursday 13th September

WTS –
EXS –
GDS -

A company decided to build offices over ground and underground.



Do you agree?

Explain how you know.

No, there would be 41 floors because you need to count floor 0

When counting in tens from any single digit, the last number never changes.

When counting back in tens from any single digit, the last number does change.

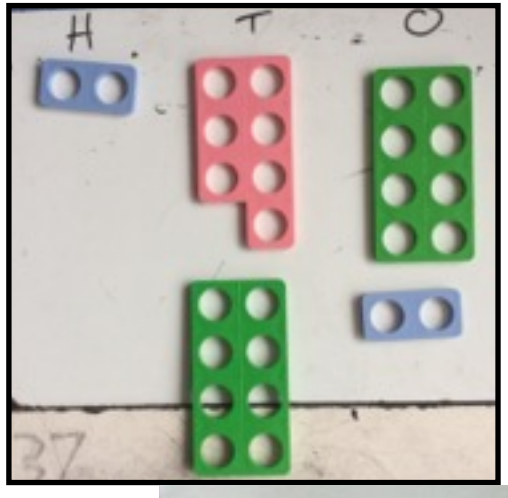
e.g.

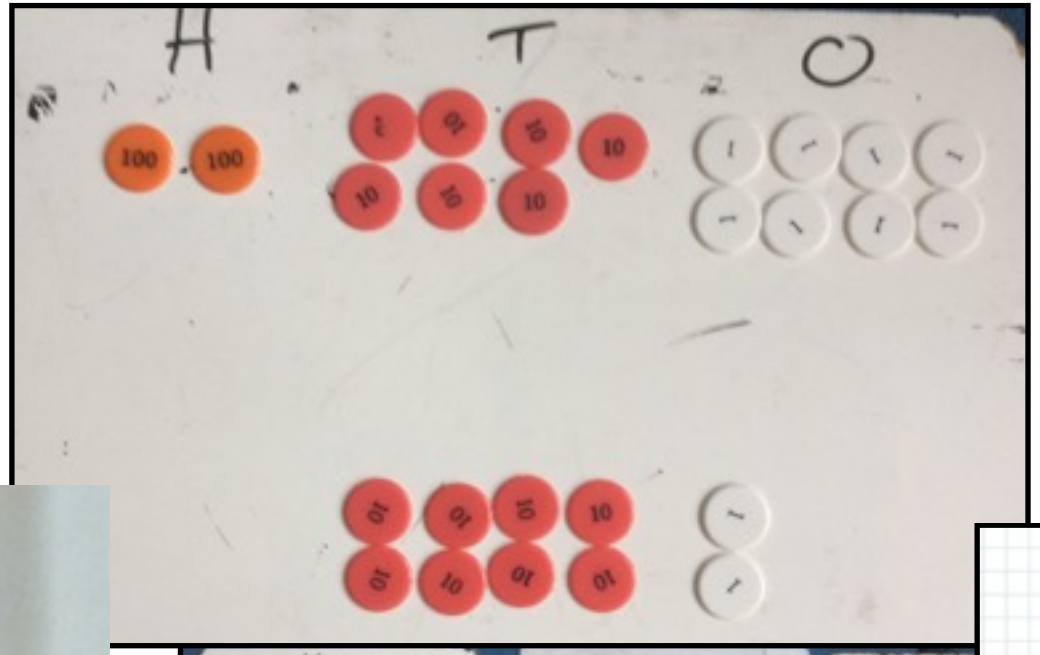
9, 19, 29, 39
9, -1, -11, -21

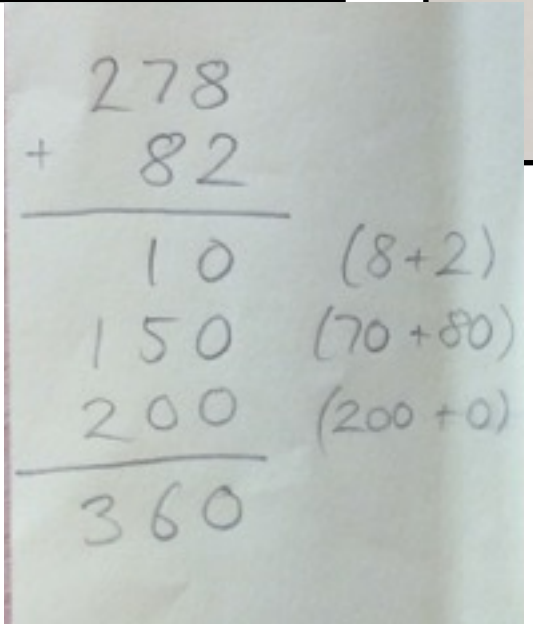
Explain why this happens.

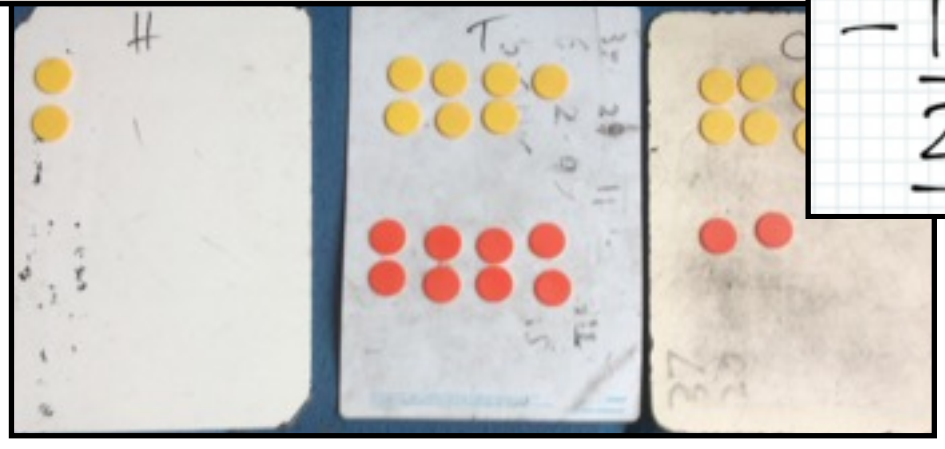
When crossing 0, the order of the numbers changes and mirrors the positive side of the number line.
Therefore the final digit in the number changes.

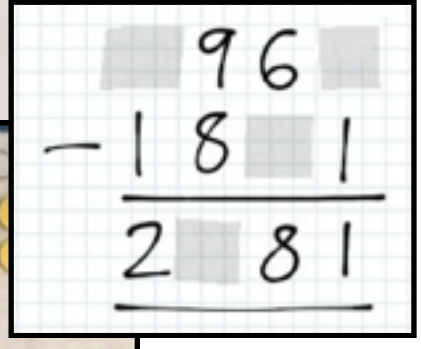
Models which improve understanding of written abstract methods











How can parents help at home?

Avoid “unteaching”

Challenge the maths stereotypes

Ask the teacher

Promote the idea that being good at maths takes practice and handwork and not some inbuilt maths ability

CLUB 99

√	16	=	√	64	=	√	36	=	√	36	=	√	144	=
36	÷ 3	=	24	÷ 2	=	28	÷ 4	=	90	÷ 10	=	30	÷ 5	=
110	x 10	=	20	x 8	=		x 12	=	50	x 9	=	70	x 10	=
880	÷ 8	=	550	÷ 5	=	700	÷ 7	=	270	÷ 3	=	200	÷ 4	=
73	- 24	=	50	- 29	=	60	- 37	=	52	- 29	=	95	- 48	=
75	÷ 5	=	75	÷ 5	=	60	÷ 5	=	85	÷ 5	=	80	÷ 5	=
4	x 100	=	9	x 60	=		9 ³	=	6	x 120	=	6	x 90	=
20	÷ 1	=	420	÷ 6	=	360	÷ 12	=	1000	÷ 10	=	1320	÷ 12	=
¾	of 48	=	¾	of 68	=	¾	of 80	=	¾	of 68	=	¾	of 72	=
91	÷ 7	=	180	÷ 9	=	80	÷ 5	=	126	÷ 7	=	68	÷ 4	=
20%	of 100	=	20%	of 40	=	20%	of 20	=	20%	of 120	=	30%	of 70	=
36	÷ 12	=	4	÷ 1	=	50	÷ 10	=	27	÷ 9	=	45	÷ 5	=
√	49	=	√	144	=	√	100	=	√	144	=	√	36	=
96	÷ 8	=	30	÷ 3	=	60	÷ 5	=	120	÷ 10	=	8	÷ 1	=
6	x 10	=	5	x 5	=	9	x 5	=	10	x 7	=	10	x 12	=
121	÷ 11	=	20	÷ 10	=	14	÷ 7	=	60	÷ 6	=	12	÷ 6	=
10%	of 864	=	10%	of 929	=	10%	of 144	=	10%	of 373	=	10%	of 618	=
1	³	=	3	²	=	2	²	=	3	²	=	2	³	=
96	- 27	=	92	- 21	=	53	- 28	=	52	- 28	=	80	- 27	=
35	÷ 7	=	99	÷ 11	=	6	÷ 2	=	21	÷ 3	=	0	÷ 5	=

8	+	8	=
7	+	7	=
7	+	7	=
1	+	1	=
10	+	10	=
3	+	3	=
0	+	0	=
3	+	3	=
7	+	7	=
5	+	5	=
2	+	2	=

A whole school programme to reinforce mental calculation facts especially times tables