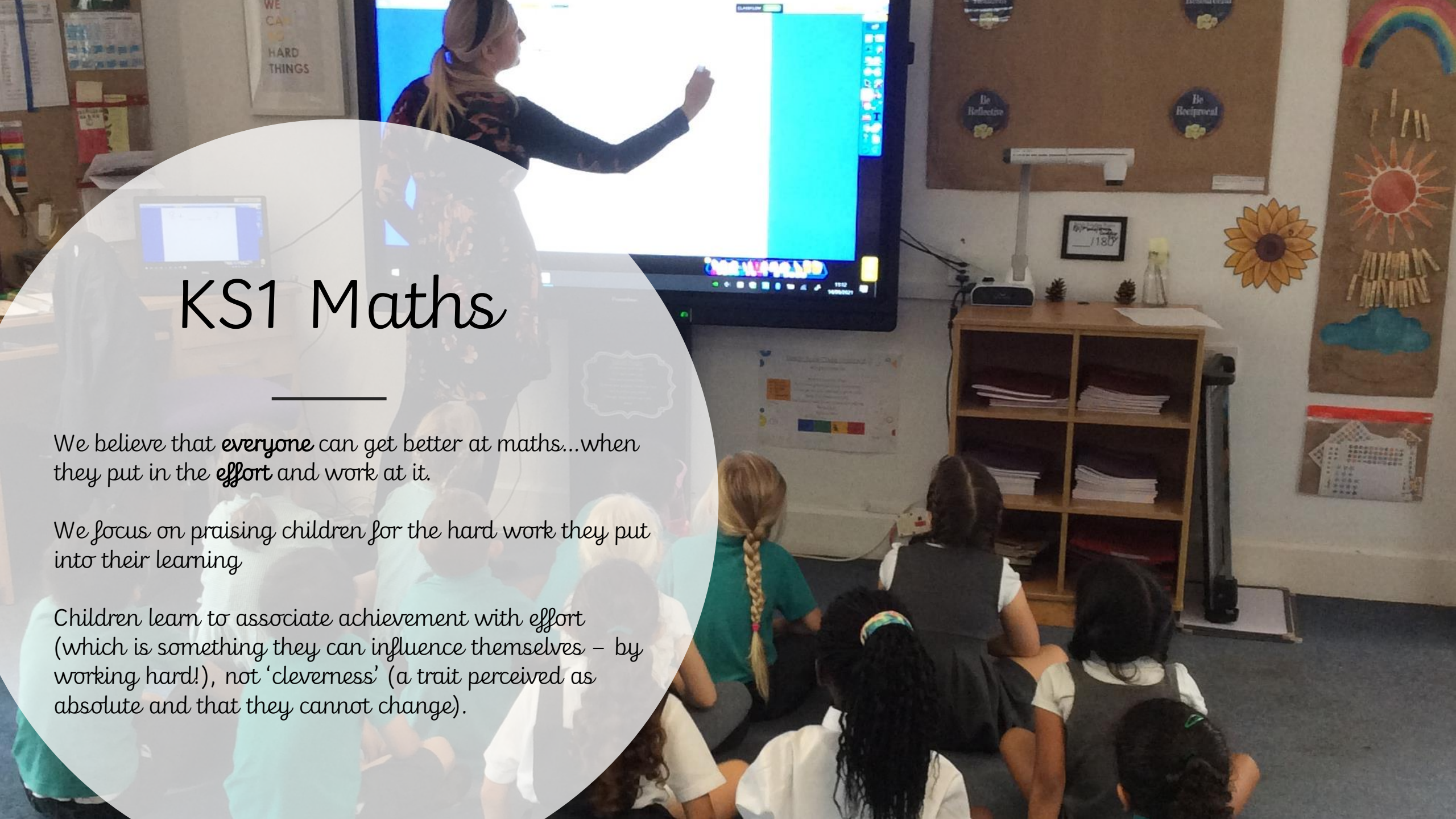
KS1 maths workshop

What the children learn and our methods of teaching



KS1 Maths

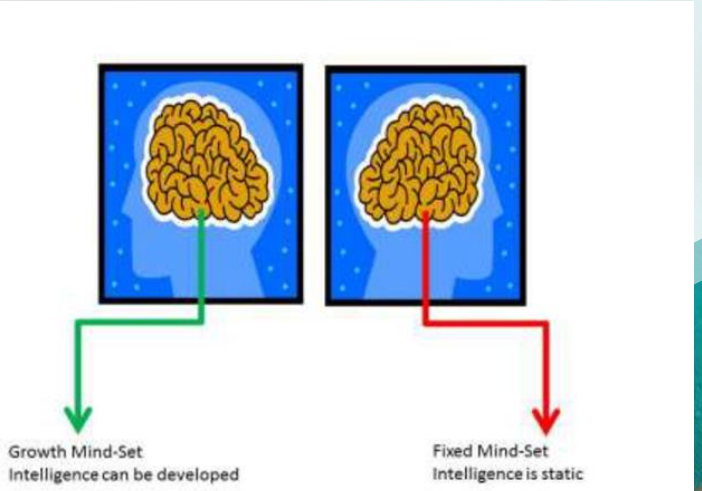
We believe that **everyone** can get better at maths...when they put in the **effort** and work at it.

We focus on praising children for the hard work they put into their learning

Children learn to associate achievement with effort (which is something they can influence themselves – by working hard!), not 'cleverness' (a trait perceived as absolute and that they cannot change).

Growth Mindset

If children hear 'I can't do maths' from parents, teachers, friends they begin to believe it isn't important. People become less embarrassed about maths skills as it is acceptable to be 'rubbish at maths'



What do we teach in KS1 Maths?

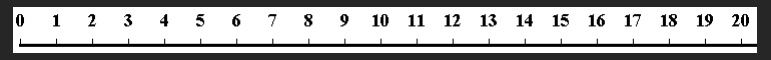
- Number bonds from 10 and 20 (i.e. 7+3=10, 18+2= 20)
- Commutativity between numbers (i.e. if I know 6+4=10, then I know that 60+40=100- year 2)
- Basic multiplication (2, 5, 10, 3)
- Basic division
- Fractions ($\frac{1}{2}$, $\frac{1}{4}$, 1/3)
- Addition and subtraction to 100 (year 2)
- Place value (ones, tens)
- Time (o'clock, half past, quarter to, quarter past)
- Measurement (mass, length, capacity)
- Money (everyday money- calculating change)
- Problem solving
- Handling data (graphing, tables, sorting data)
- Shape and space

Today we will focus on the red highlighted examples

What resources might we use?

In KS1 children will continue to develop their maths understanding using practical resources to support the embedding of essential concepts

Number lines



Rekenreks

Counters

Multilink/unifix

Natural resources and every day objects

Hundred Squares

Place value cards

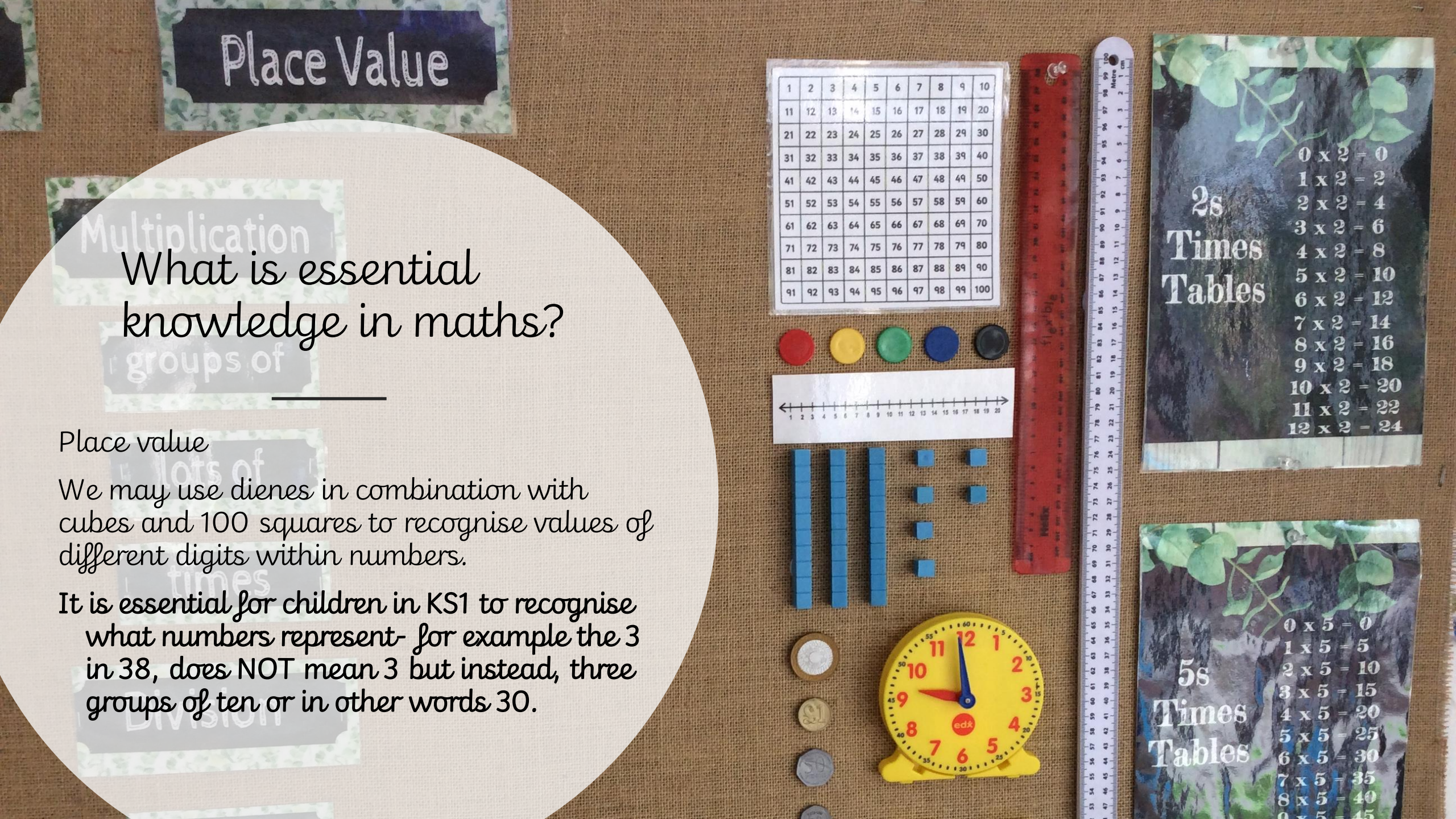
Dienes

What is essential knowledge in maths?

Place value

We may use dienes in combination with cubes and 100 squares to recognise values of different digits within numbers.

It is essential for children in KS1 to recognise what numbers represent- for example the 3 in 38, does NOT mean 3 but instead, three groups of ten or in other words 30.

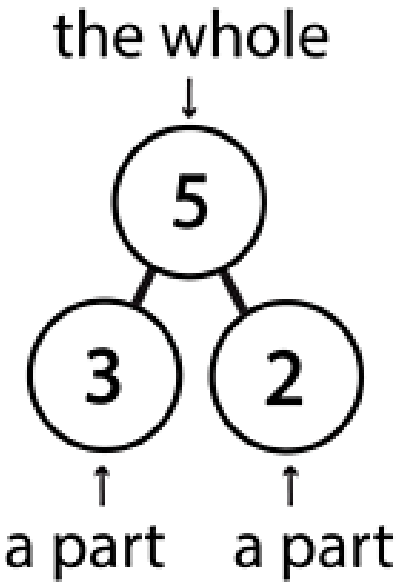


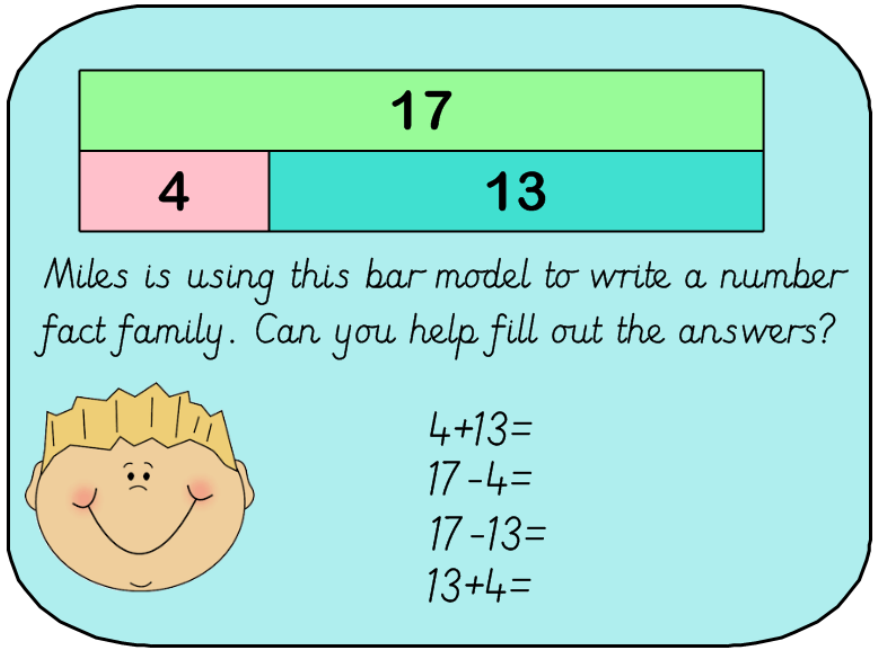
Representations in place value

The children will learn different ways of representing numbers in order to show that they have a deep understanding of number.

They will use 'part whole' models and bar models to show different constituent parts of numbers

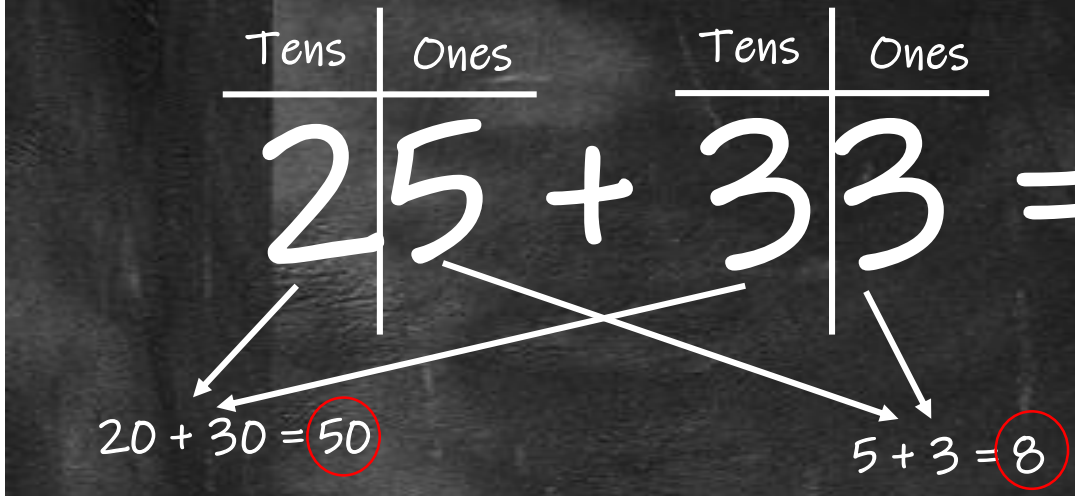
These are some examples of the types of models used. These models are then used in order to support children in understanding fact families and will give children a deeper understanding of number





What methods might we use?

In KS1 children will learn new methods of solving number problems- one such method is called partitioning

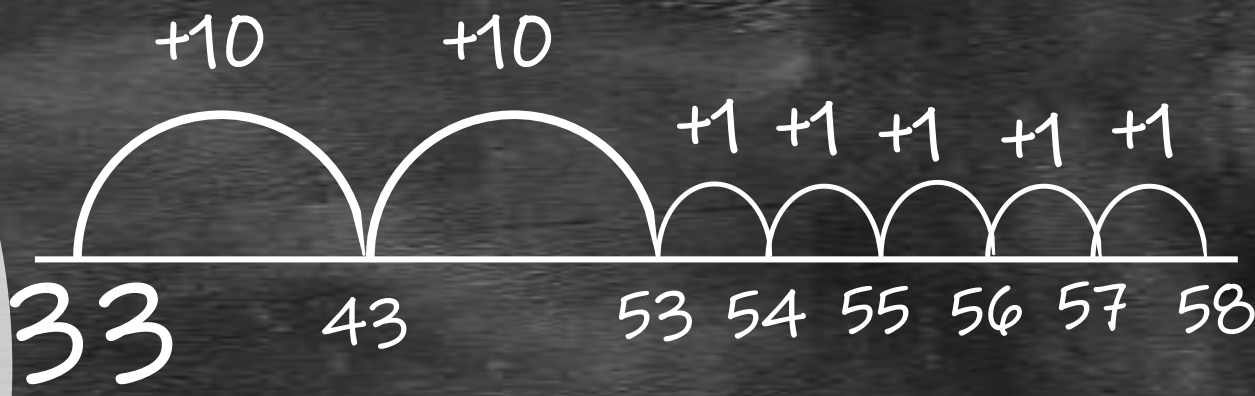


25 + 33= 58
Step 1: partition numbers (tens 20 + 30) (units 5+3)
Step 2: add up the Tens (T) (20 + 30 = 50)
Step 3: add up the Ones (O) (5+ 3 = 8)

55 + 26 (T 50 + 20= 70) (U 5+6= 11)
70 + 11 = (T70 +10= 80) (U 0+1=1)
80+1=81

Using an un-structured number line

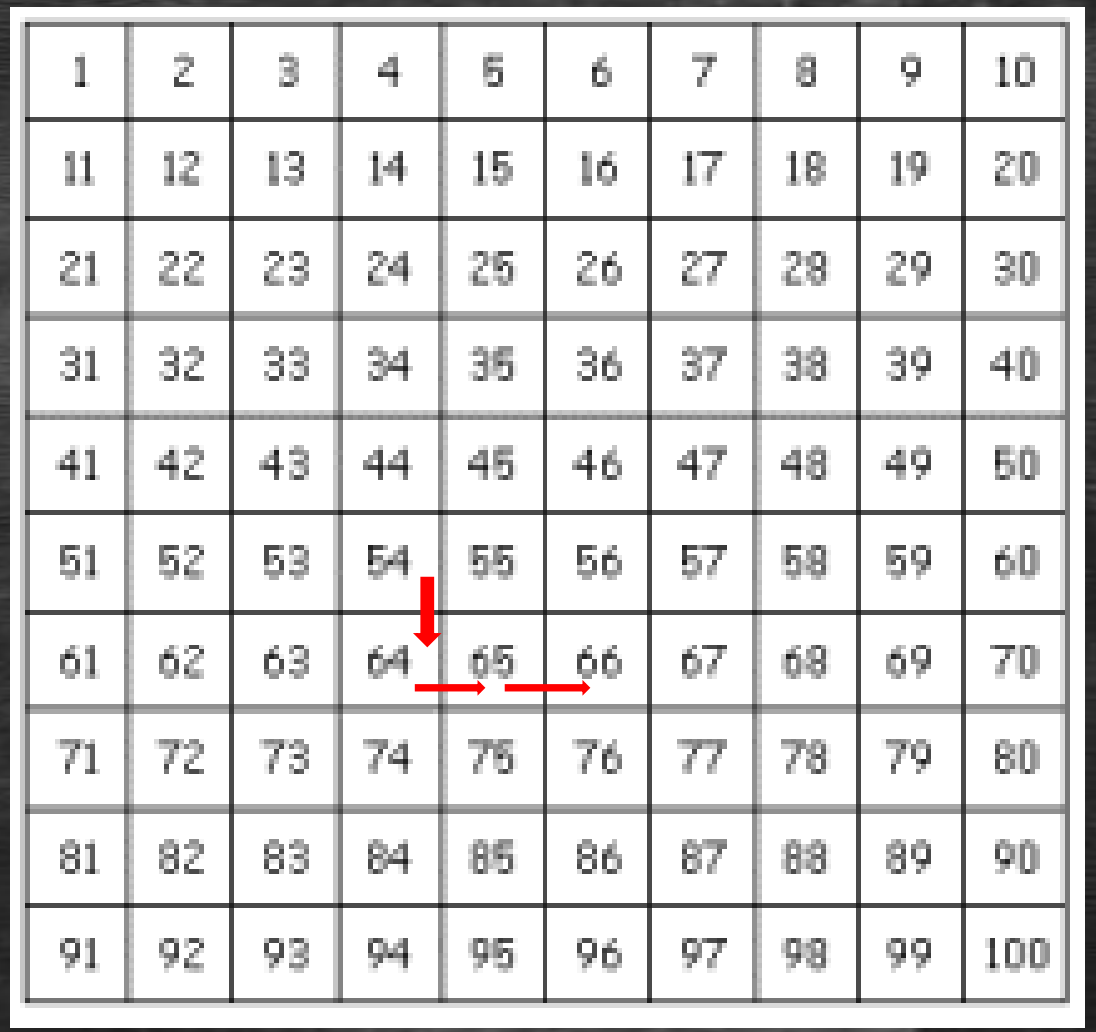
- Step 1: partition 2nd number (25- 2 tens (20) and 5 ones)
- Step 2: jump the 10's (2 tens)
- Step 3: jump the ones (5)



Addition and Subtraction with a hundred square

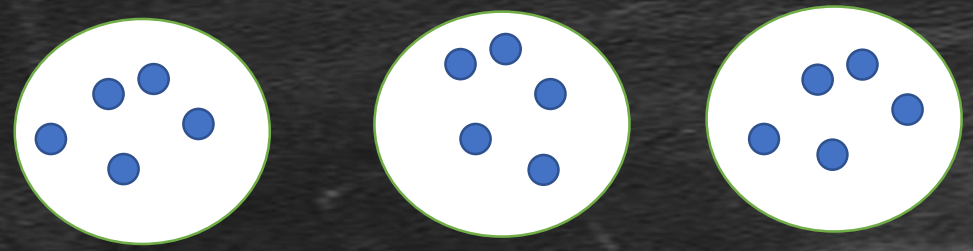
- Adding 12
- 54 +12= 66
- Step 1 :Partition the number (one 10, two units) 10 & 2
- Step 2: add on the 10 (down 1)
- Step 3 add on the units (right 2)

- Adding 10 go down 1 row
- Subtracting 10 up 1 row
- Adding 1go right 1 column
- Subtracting 1 go left 1 column



Multiplication in KS1

- First recognize that multiplication is repeated addition
- No of lots how many per group total
- 3 x 5 = 15
- Is the same as 2 lots of 5 or 5 + 5 + 5 = 15
- Use pictorial cues to represent a x sum.
- Encourage them to write the sum:



5 + 5 + 5 = 15