

KS1 Maths Parents Meeting

Addition

In Foundation Stage and Year 1 there is an emphasis on games and practical work giving experience of combining 2 groups of objects (eg counters, buttons, etc) and then finding the total number.

Correct vocabulary is taught and reinforced from the beginning: add, addition, total, plus, sum.

Recording may begin pictorially, eg to illustrate a 'number story'.

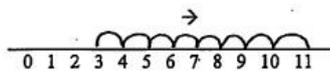
'If there are 3 dogs in the park, and then 2 more come, how many are there altogether?'

This is then linked to the use of symbols to begin using horizontal recording of number sentences.

$$3 + 2 = 5$$

Number lines are introduced to reinforce the idea of addition as 'counting on' from a number.

$$3 + 8 = 11$$



number line.

Children count each step along the

A further stage on from this would be to use an empty number line to support children's own working out.

Once children are secure with place value (understanding tens and units in 2 digit numbers) they can move on to addition by 'partitioning'.

eg $12 + 26$ $12 + 26$
 / \ / \
 $10 + 2$ $20 + 6$

Add the units first $2 + 6 = 8$

Add the tens next $10 + 20 = 30$

Combine the totals $30 + 8 = 38$

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Subtraction

Early emphasis is on games and practical activities giving experience of subtraction as 'taking away' to find a smaller number left.

Correct vocabulary is taught and reinforced: subtract, subtraction, minus, difference, how many left?

Recording may begin pictorially, eg to illustrate a number story.

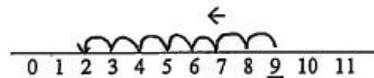
'Tom has 7 sweets and then eats 4 of them, how many sweets does he have left?'

This is then linked to the use of symbols to begin using horizontal recording and number sentences.

$$7 - 4 = 3$$

Number lines are introduced, initially to reinforce the idea of subtraction by counting back.

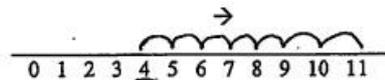
$$9 - 7 = 2$$



Children count each step back along the number line.

However, once secure in their understanding of subtraction as 'taking away', and as a larger total being reduced, children begin to use a number line to solve subtraction or 'find the difference' between two numbers by counting on from the smaller number (may not be until Year 2 or even Year 3 for some children).

'Find the difference between 4 and 11'



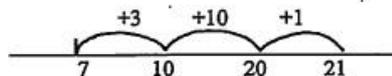
Begin at 4, count jumps to get to 11.

Children will be encouraged to do this mentally.

Counting on becomes more complex.

$$21 - 7$$

$$3 + 10 + 1 = 14$$



Children 'bridging' through or using multiples of 10 to make larger jumps, and then totalling up jumps made to find the answer.

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Multiplication

Children will begin to develop their understanding of multiplication as the combining of equal groups to give a total, through practical grouping activities.

‘If 3 children have 3 sweets each, how many sweets altogether?’

They will need lots of practical experience with objects/maths apparatus initially.

Recording begins with ‘repeated addition’.

○ ○ ○ ○	→ 2 + 2 + 2 + 2 = 8
○ ○ ○ ○	
4 groups of 2 counters	4 groups of 2 is 8

This is then linked to the use of the multiplication symbol, and horizontal recording of number sentences.

$$4 \times 2 = 8$$

‘Array diagrams’ are introduced in Year 2. Children read number of rows and columns.

○ ○ ○	3 x 4 = 12
○ ○ ○	4 x 3 = 12
○ ○ ○	
○ ○ ○	

This reinforces the idea of the ‘commutative rule’ : multiplication can be reversed without changing the total.

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Division

Children will begin by developing their understanding through practical sharing and grouping activities.

'Share the sweets equally between the teddies. Are there any left over?'

Recording begins with repeated subtraction.

→ How many groups of 3 can we make from 12 buttons?

$$12 - 3 = 9$$

$$9 - 3 = 6$$

$$6 - 3 = 3$$

$$3 - 3 = 0$$

3 has been subtracted 4 times, so we have 4 groups of 3.

This is linked to the division symbol in horizontal recording.

$$12 \div 3 = 4$$

Array diagrams can also be used to model division:

12 counters

How many groups or rows of 3?

→ there are 4 rows of 3

so, $12 \div 3 = 4$

How many groups or rows of 4?

→ there are 3 rows of 4

so, $12 \div 4 = 3$

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