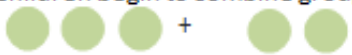
Discovery Schools Academy Trust

Addition

Maths for young children should be meaningful. Where possible, concepts should be taught in the context of real life.

GUIDANCE / MODELS AND IMAGES	KEY VOCABULARY
If available, Numicon shapes are introduced straight away and can be used to: • identify 1 more/less • combine pieces to add. • find number bonds. • add without counting.  Children can record this by printing or drawing around Numicon pieces. Children begin to combine groups of objects using concrete apparatus  Construct number sentences verbally or using cards to go with practical activities. Children are encouraged to read number sentences aloud in different ways "Three add two equals 5" "5 is equal to three and two" Children make a record in pictures, words or symbols of addition activities already carried out. Solve simple problems using fingers  5 + 1 = 6 Number tracks can be introduced to count up on and to find one more: 1 2 3 4 5 6 What is 1 more than 4? 1 more than 13? Number lines can then be used alongside number tracks and practical apparatus to solve addition calculations and word problems.  **Children will need opportunities to look at and talk about different models and images as they move between representations.**	**Games and songs can be a useful way to begin using vocabulary involved in addition e.g.** Alice the Camel add more and make sum total altogether score double one more, two more, ten more… how many more to make…? how many more is… than…?

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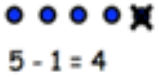
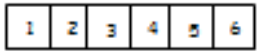
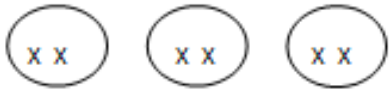
Subtraction

Maths for young children should be meaningful. Where possible, concepts should be taught in the context of real life.

GUIDANCE / MODELS AND IMAGES	KEY VOCABULARY
Children begin with mostly pictorial representations XXX XX	**Games and songs can be a useful way to begin using vocabulary involved in subtraction e.g.** Five little men in a flying saucer
Concrete apparatus is used to relate subtraction to taking away and counting how many objects are left. Concrete apparatus models the subtraction of 2 objects from a set of 5.  5 - 1 = 4	
Construct number sentences verbally or using cards to go with practical activities.	take (away)
Children are encouraged to read number sentences aloud in different ways "five subtract one leaves four" "four is equal to five subtract one"	leave how many are left/left over?
Children make a record in pictures, words or symbols of subtraction activities already carried out.	how many have gone?
Solve simple problems using fingers  5 - 1 = 4	one less, two less... ten less...
Number tracks can be introduced to count back and to find one less:  1 2 3 4 5 6	how many fewer is... than...?
What is 1 less than 9? 1 less than 20?	difference between
Number lines can then be used alongside number tracks and practical apparatus to solve subtraction calculations and word problems. Children count back under the number line.  8 - 3 = 5 0 1 2 3 4 5 6 7 8 9 10	is the same as
Children will need opportunities to look at and talk about different models and images as they move between representations.	

Multiplication

Maths for young children should be meaningful. Where possible, concepts should be taught in the context of real life.

GUIDANCE / MODELS AND IMAGES	KEY VOCABULARY
The link between addition and multiplication can be introduced through doubling. If available, Numicon is used to visualise the repeated adding of the same number. These can then be drawn around or printed as a way of recording. Children begin with mostly pictorial representations:   How many groups of 2 are there? Real life contexts and use of practical equipment to <u>count in repeated groups of the same size</u>:  How many wheels are there altogether?  How much money do I have? Count in twos; fives; tens both aloud and with  objects Children are <u>given multiplication problems set in a real life context</u>. Children are encouraged to visualise the problem. How many fingers on two hands? How many sides on three triangles? How many legs on four ducks? Children are encouraged to read number sentences aloud in different ways "five times two makes ten" "ten is equal to five multiplied by two"	lots of groups of times multiply multiplied by multiple of once, twice, three times... ten times... ...times as (big, long, wide... and so on) repeated addition double

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Division and fractions

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GUIDANCE / MODELS AND IMAGES	KEY VOCABULARY
The ELG states that children **solve problems, including doubling, halving and sharing.** Children need to see and hear representations of division as both grouping and sharing. Division can be introduced through halving. Children begin with mostly pictorial representations linked to real life contexts:  **Grouping model** Mum has 6 socks. She grouped them into pairs – how many pairs did she make?  **Sharing model** I have 10 sweets. I want to share them with my friend. How many will we have each? Children have a go at recording the calculation that has been carried out.	halve share, share equally one each, two each, three each… group in pairs, threes… tens equal groups of divide divided by divided into left, left over

FRACTIONS

GUIDANCE / MODELS AND IMAGES	KEY VOCABULARY
Although not explicit in the Development Matters document, the sharing model is a useful way of introducing young children to fractions and calculating with fractions. Setting the problems in real life context and solving them with concrete apparatus will support children's understanding. "I have got 5 bones to share between my two dogs. How many bones will they get each?"  Children have a go at recording the calculation that has been carried out. 2 ½ + 2 ½ = 5	As division vocabulary plus: fraction half halves third thirds