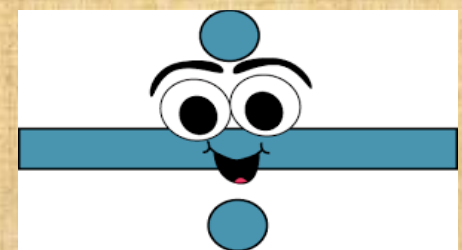
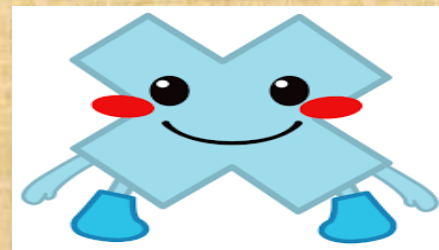
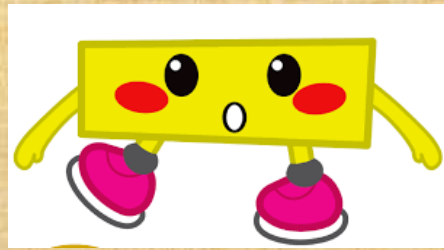
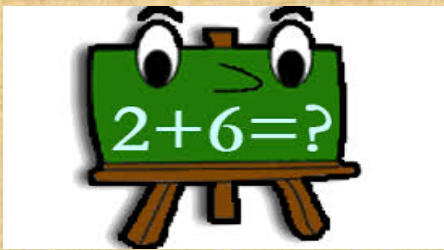


Family Learning Support



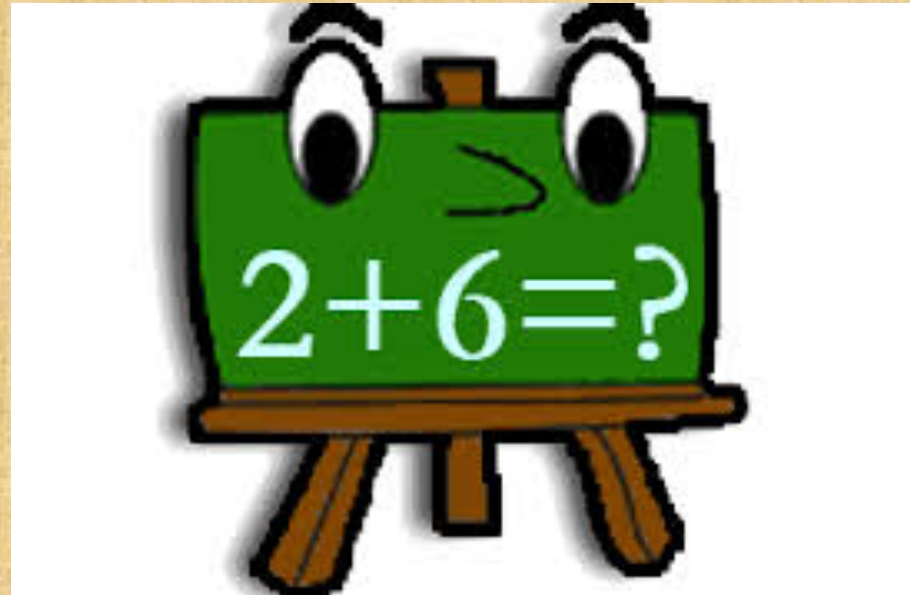
Numeracy at EARLY Level



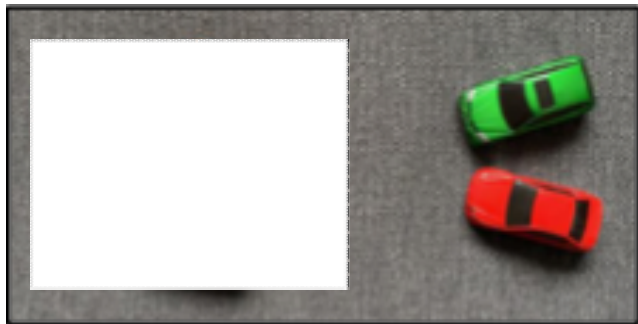
This is a guide to supporting your child/ren with numeracy at home.

Here we aim to share with you the main approaches children use when learning about the 4 operations – addition, subtraction, multiplication and division at Early Level.

Addition



At Early Level, when introducing addition it is important that children experience lots of **practical investigations** using **concrete materials** (things they can touch and move around). When they are confident counting a group of items and have a good understanding that the last number they count is the total, they should then be given lots of opportunities to count sets of objects together.



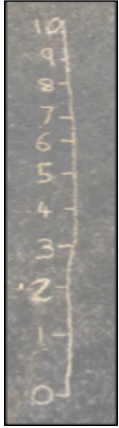
Toys, food and other everyday objects can be used to develop understanding of addition.

- "You have 3 cars and I have 2 cars. How can we find out how many cars we have altogether?"
- "I wonder what would happen if we added 2 more cars?"

This then progresses to 'screening', where one set of items is covered up. This helps a child's ability to 'count on' from a number.

- "There are 3 cars under the paper. Here are 2 more. How many do we have altogether?"

Children learn to make sense of the numbers around them in lots of different ways. **Number lines, dominoes, dice, Numicon and five and ten frames** can be used to develop understanding of addition.



I am on 6 and you are on 2. How many jumps will it take for you to get to me?

If you were on 4, I wonder what number you would be on if you jumped 2 spaces forwards?



What do you see? How do you see it? I wonder if you can show me the total number of dots another way?



I see 3 and 3.
I see $4 + 2$.
I see 2 plus 2 plus 2.

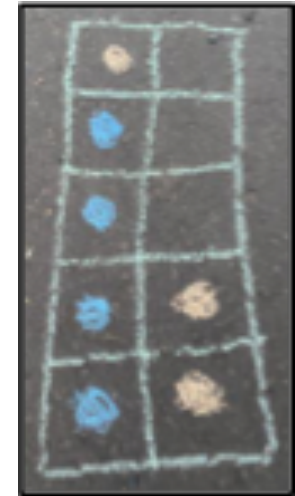


Numicon is a great resource.

Ten frame -

How many dots there are altogether?

How many more dots would we need to fill the grid?



Five frame -

How many blue dots are there?

How many dots altogether?

How many do we need to make 5?

Children use their fingers to help them count and add. This is a very important stage in their number development and should be encouraged. At first, children count in order 1, 2, 3 before being able to recognise the different **finger patterns**. Time spent teaching finger patterns is important.

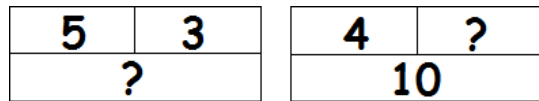


1. When asked to show 6 fingers, children first start off with counting one at a time.
2. With practice, children can show 6 fingers automatically.
3. Next, children can show 6 in different ways, so they might show 4 and 2, or 3 and 3, or 5 and 1.
4. When children can confidently do this without counting, they can show finger patterns above their head, called 'Bunny Ears' – "Show me 8. Now show me 8 another way."

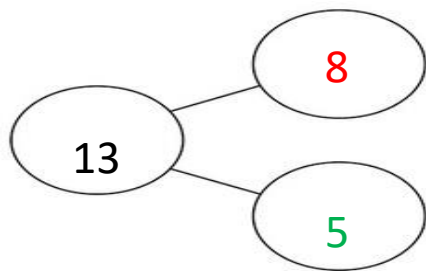
Finger patterns are used to allow children to develop their understanding of the combinations of numbers to 10.

$0+10, 1+9, 2+8, 3+7, 4+6, 5+5, 6+4, 7+3, 8+2, 9+1, 10+0$
These are called number bonds.

Children use written calculations to show their understanding. They learn that a whole number, e.g., 13 can be made up of different 'parts'. This is called the '**part-part-whole**' approach. This helps children to **see** the connection between addition and subtraction.



The part-part-whole method is used to help children work out missing number calculations.



$8 + 5 = 13$
$5 + 8 = 13$
$13 - 8 = 5$
$13 - 5 = 8$

$7 + 5 =$

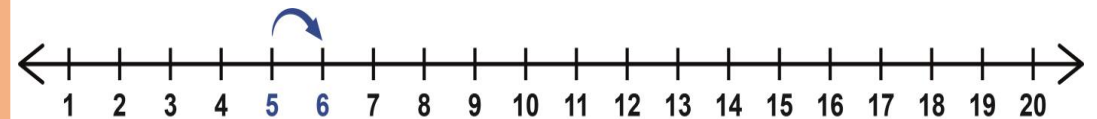
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$7 + 5 = 12$
 $5 + 7 = 12$
 $12 - 7 = 5$
 $12 - 5 = 7$

Number lines are also used to help children 'visualise' their thinking.



I have 5 milk cartons and I need to get one more.
How many milk cartons will I have in total?

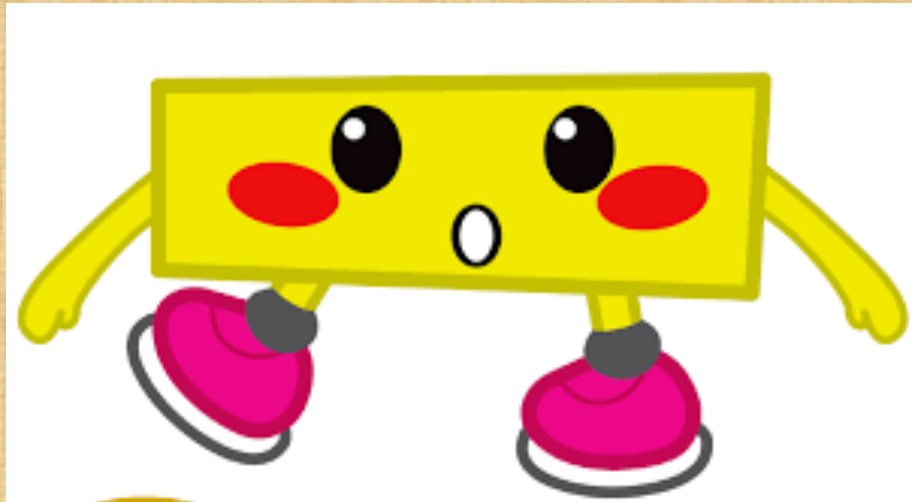
Children learn to write number sentences:

$7 + 4 = 11$

As children learn early addition facts, they will also learn 'doubles'.



Subtraction



When introducing subtraction at Early Level, activities to be relatable to children's lives. Stories, songs, rhymes, role play, drawing pictures and playing with objects all help children to learn about subtraction. Just like with addition, children need to experience lots of **practical investigations** using **concrete materials** (things they can touch and move around).



Addition and subtraction are taught together. This is to make sure children have a deeper understanding of the relationship between them.

Toys, food and other everyday objects can be used to help them learn about subtraction.

“I wonder what would happen if we took 2 shells away?”

Screening some of the objects (covering up with a piece of paper) helps children to learn to count on or find the difference between numbers.

I had some shells.

I've taken 4 away.

Now there are 2.

I wonder how many shells I started with?

Children need lots of practise in **counting backwards** to be able to subtract successfully. They need to understand that if they subtract objects from a collection, then the number in the collection will get smaller. Through lots of **practical activities**, children learn subtraction facts within 10.



In practical activities, children solve life-like problems. They hear and then begin to use the words associated with subtraction:

Take away

Less than

Minus

Less

Less than

How many more?

How many left?

Find the difference between

I have 5 balls. Two burst. How many do I have left?



A teddy bear costs £9 and a ball costs £6. How much more does the teddy bear cost?



10 people are on a bus. Some people leave. Now there are 6 people left. How many people got off the bus?



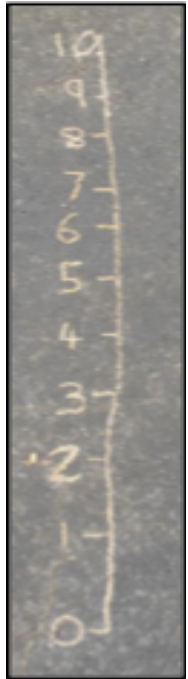
Drawing pictures and using practical equipment can help children to solve calculations like these.



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Early
Level

Number lines and 5 or 10 frames help children to carry out subtraction calculations. It is really important that children understand how **addition and subtraction are linked**. Children start to record simple subtraction stories horizontally, e.g., $5 - 1 = 4$.

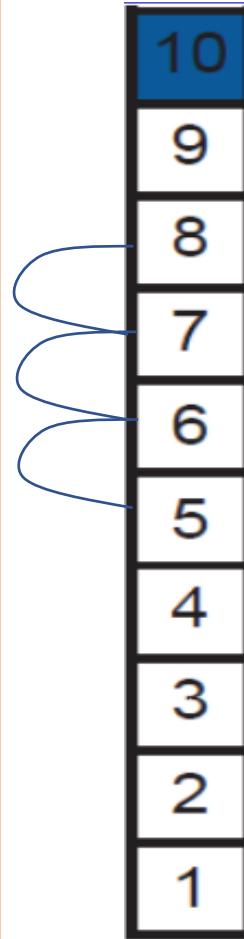


Number lines are very helpful when counting back, e.g., $6 - 2 = ?$

1. Put your finger on the 6.
2. Now 'jump' back 2 steps.
3. So, $6 - 2 = 4$



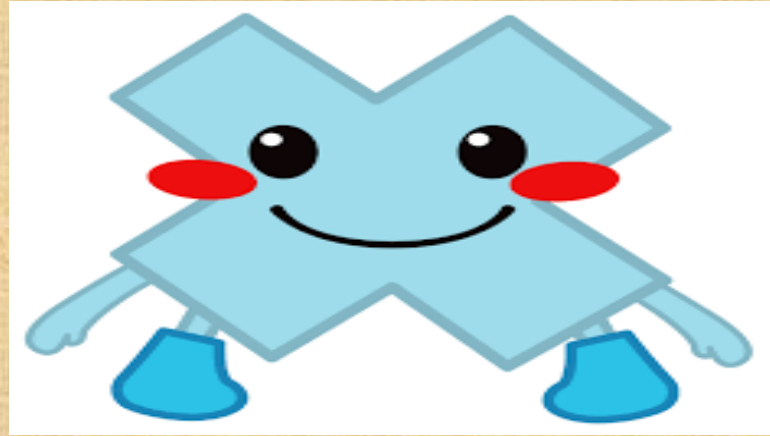
Using this '5 frame', children can work out:
 $3 + 1 = 4$, so
 $4 - 1 = 3$



$$8 - 3 = 5$$

$$5 + 3 = 8$$

Multiplication



At Early Level, children learn about multiplying through **grouping**. Just like with addition and subtraction, children need to have lots of practice of using **concrete materials** (things they can move around and touch) both indoors and outdoors to help make connections in their learning. Children's early experiences of multiplication can be developed through stories, songs and rhymes involving counting on and back.

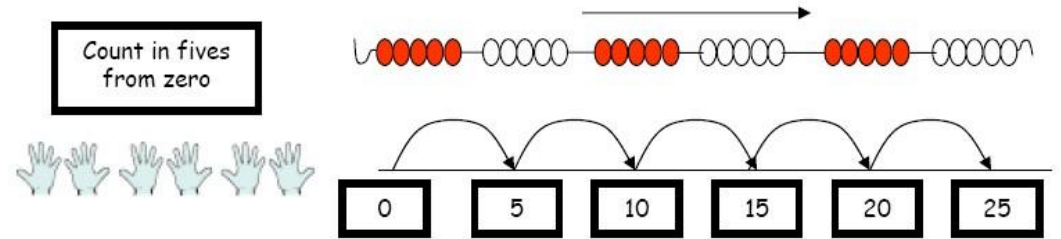


We have ten leaves.
I wonder if we can make
groups of two with them?

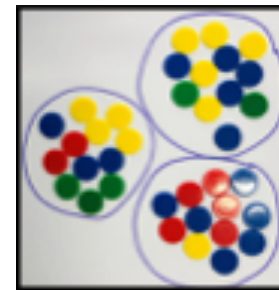


There are nine of us here.
I wonder if we can get into
groups of 3?

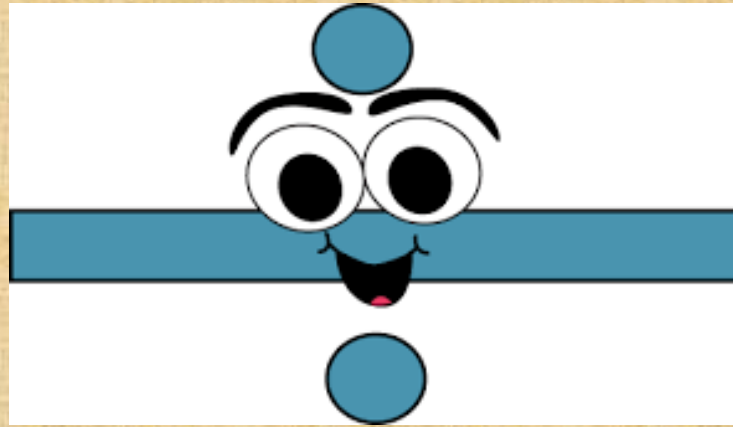
Visual aids are used to support understanding of counting in 2s, 5s and 10s.



Real items (such as toys, counters and sweets) are used to help children understand grouping.



Division



At Early Level, children learn about dividing through **sharing**. It is through grouping and sharing that the foundations are laid for multiplication, division and doubling numbers. Just like with addition and subtraction, children need to have lots of practice of using **concrete materials** (things they can move around and touch) both indoors and outdoors to help make connections in their learning.

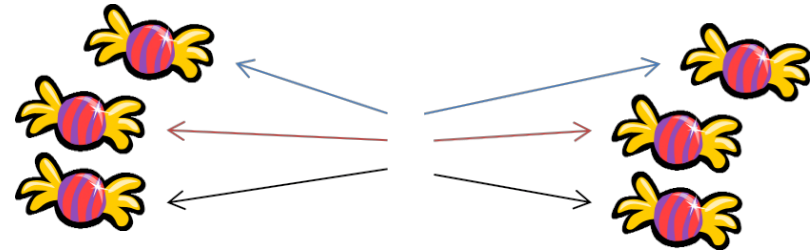


I wonder what is the best way to share these strawberries between you and your friend?



We have ten leaves. I wonder if we can make groups of two with them?

Find half of a quantity of objects by sharing them between 2.
So, half of 6 is 3...
...and 2 groups of 3 is 6.



There are 3 of us here today and we have 9 sticks.

How can we make sure that we all have the same number of sticks?

“Parental involvement is about supporting pupils and their learning. It is about parents and teachers working together in partnership to help children become more confident learners.”

(Scottish Schools (Parental Involvement) Act Guidance, 2006)

Please let us know if you have found this guide about numeracy helpful.

Thank you!

Should you have any questions, please get in touch.

