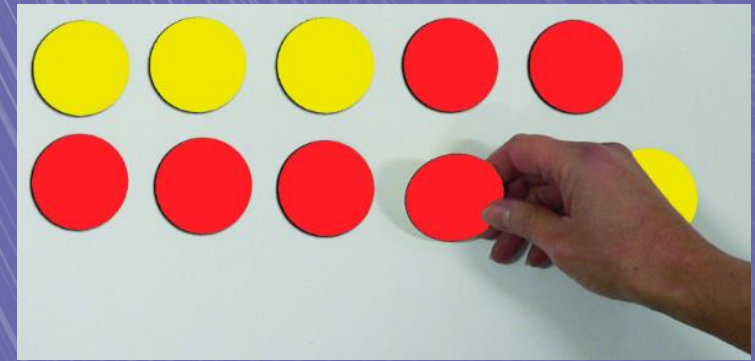


WHAT MATHS LOOKS LIKE IN EYFS AND KS1

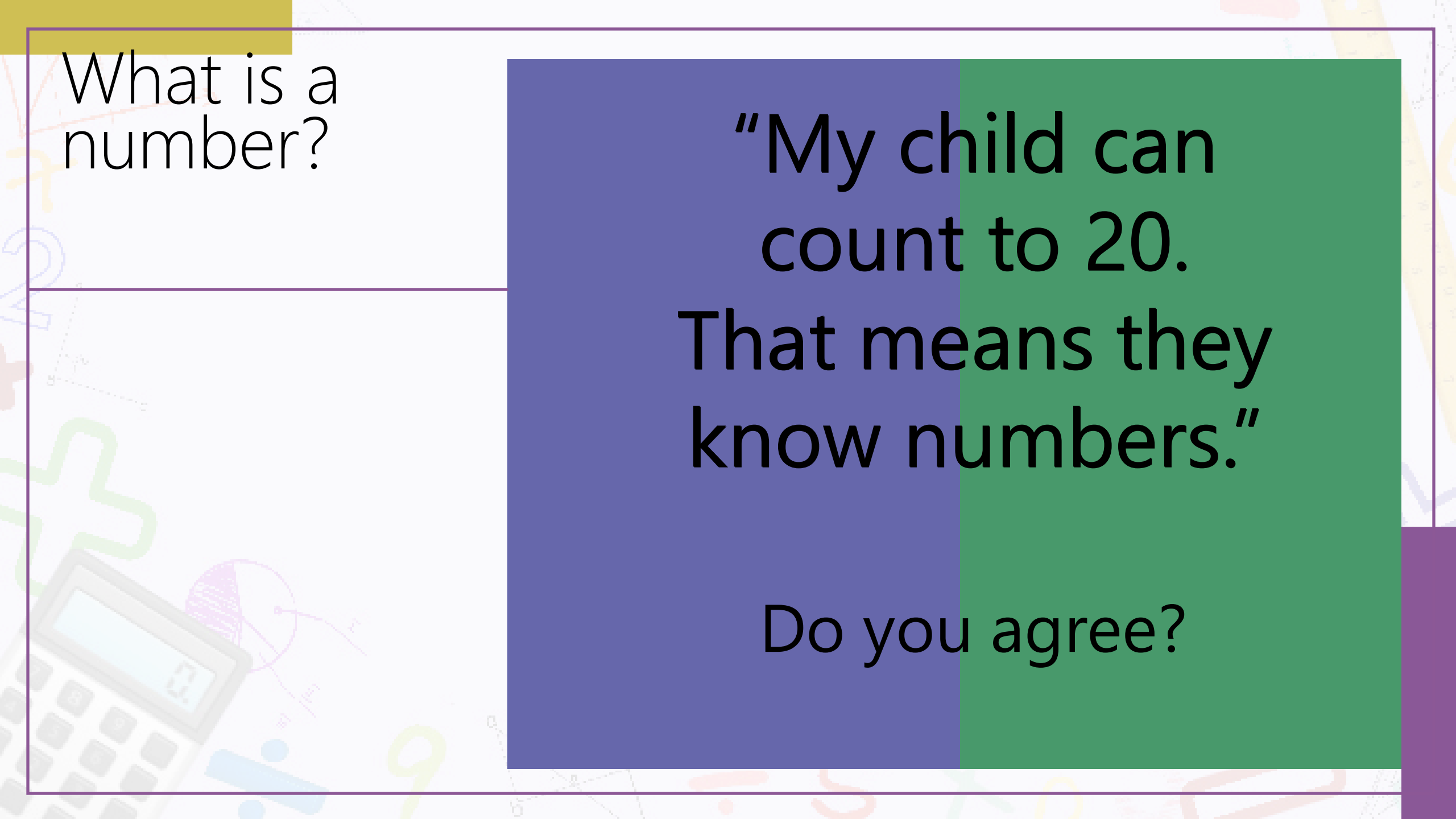


OUTCOMES

Today I will be explaining what maths looks like at school and what you can do at home to support your child.

We will mainly, look at the number part of the curriculum, but there are other parts, such as time, measure and statistics. However, with a deep understanding of number the children will have a better understanding of the other areas.



The background of the slide features a collage of mathematical and educational elements. In the bottom left corner, there is a detailed illustration of a calculator. Scattered throughout the background are various numbers (1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20), mathematical symbols (plus, minus, multiplication, division, percent, equals), and geometric shapes (a circle with a radius line, a triangle, and a square). The entire slide is framed by a thin purple border.

What is a
number?

"My child can
count to 20.
That means they
know numbers."

Do you agree?

IMPORTANT



Wider is better
than taller!!

EARLY LEARNING GOALS

Not a lot, but it is the most important part of maths your child will learn.

However, we do teach other parts of maths that are not stated here, such as: shape, days of the week, measure, prepositional language.

Mathematics

Number

- Have a deep understanding of number to 10, including the composition of each number.
- Subitise (recognise quantities without counting) up to 5.
- Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts.

Numerical Patterns

- Verbally count beyond 20, recognising the pattern of the counting system.
- Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity.
- Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.

WHAT IS A NUMBER?

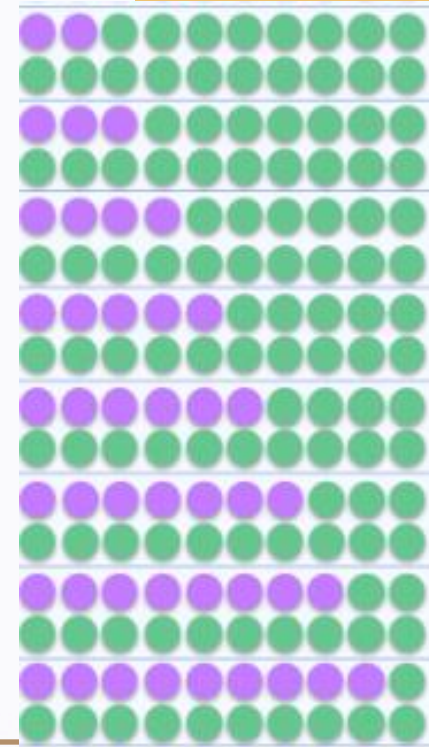


In Reception, we spend a long time teaching the children the composition of each number. It states in the ELG, that each child is to have a "DEEP UNDERSTANDING" of numbers to 10. These are sometimes referred to as number bonds.

Also, it is important to teach your child about "one to one" correspondence.

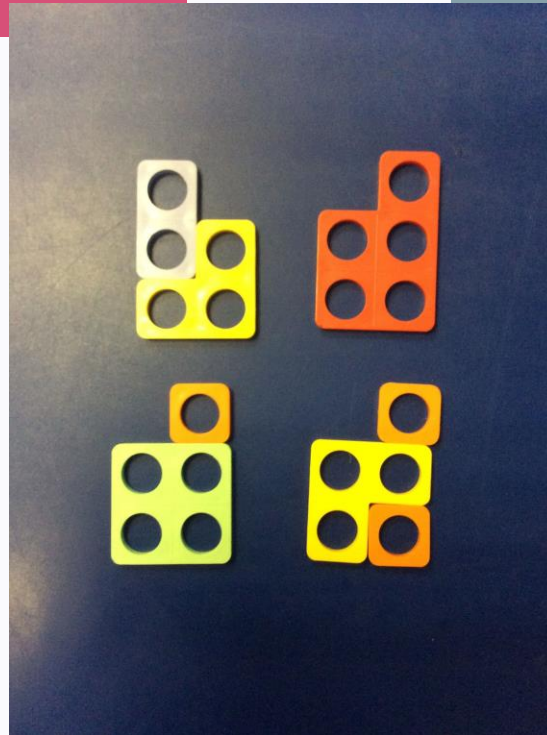
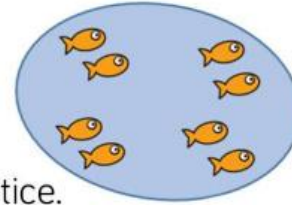
In Year 1 we teach them the composition of each number up to 20 and Year 2 we teach them numbers to 100.

It is vital that children have a DEEP UNDERSTANDING of numbers to 20 by at least the end of Year 1. These are sometimes referred to as number bonds.



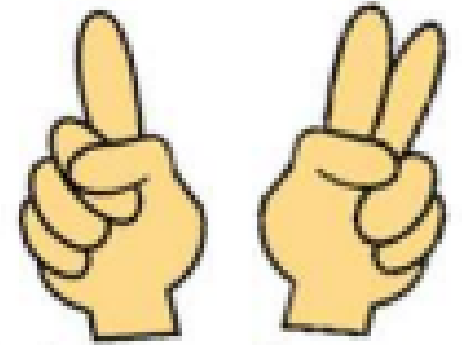


Provide each child with a blue 'pool' and 8 fish. Ask them to arrange their fish into pairs. Ask the children what they notice. Ask the children to arrange their fish in a different way and to discuss the different compositions of 8 that they notice.



$$\begin{array}{|c|c|c|c|c|} \hline \bullet & \bullet & \bullet & \bullet & \bullet \\ \hline \bullet & \bullet & \bullet & \bullet & \\ \hline \end{array} + \begin{array}{|c|c|c|c|c|} \hline & & & & \\ \hline & & & & \\ \hline \end{array} = 17$$

WHAT OTHER WAYS



Asking your child to show you the number in different ways is another great way of them showing their understanding.

You can use objects around the house, such as apples, toys, pasta.

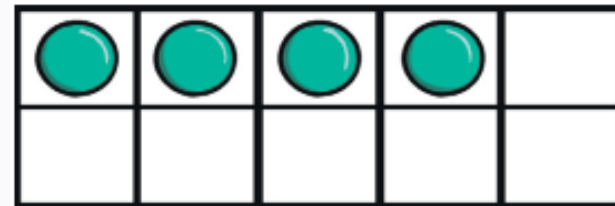
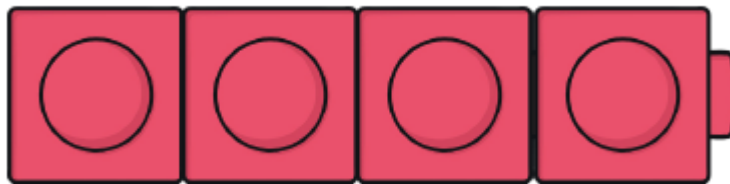
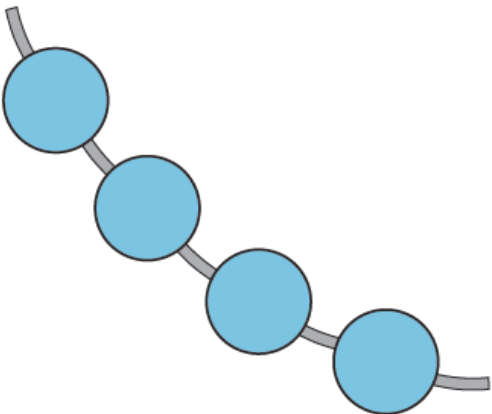
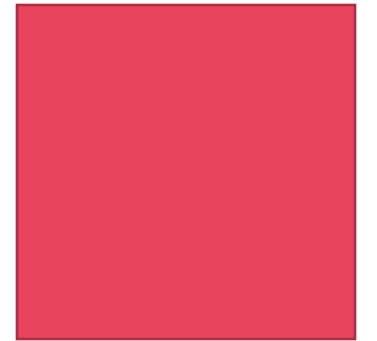
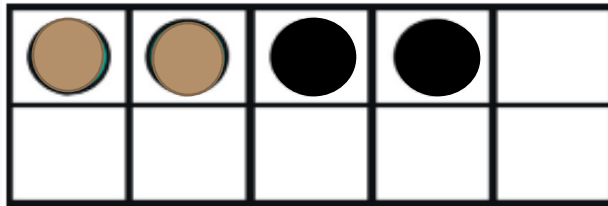
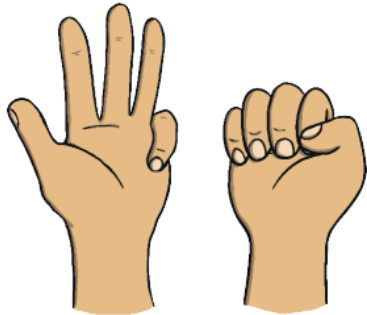
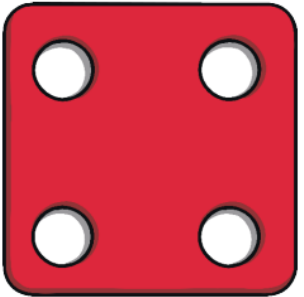
Make it an object your child likes to make it more interesting.

You do not even have to tell them it is maths.



NUMBER RECOGNITION

We teach the children that all these things mean the same thing to represent a number.

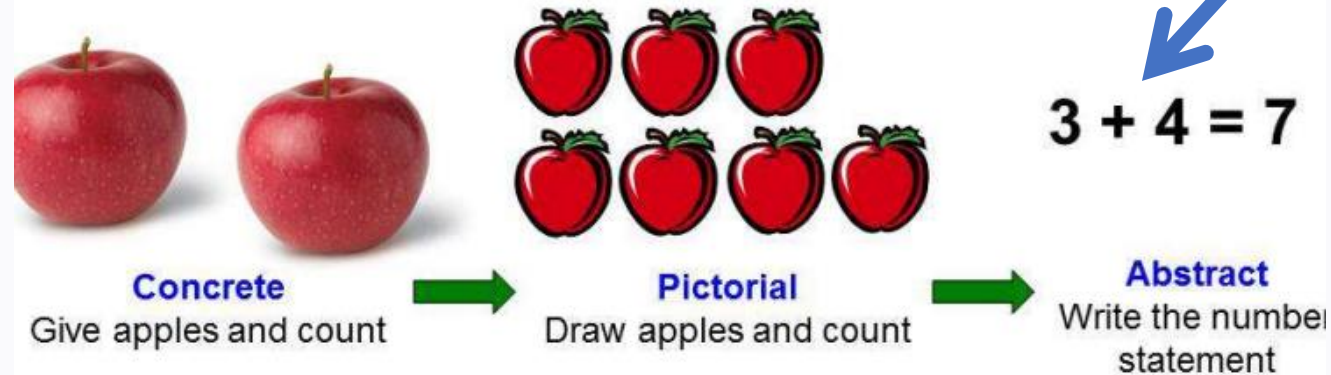


CPA

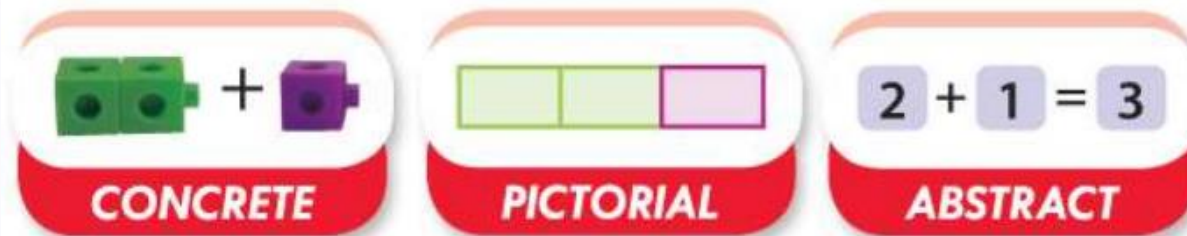
CPA Approach	
Stage	Characteristics
Concrete	Refers to the use of manipulatives, measuring tools or objects that the student handles.
Pictorial	Refers to the use of drawings, diagrams, charts or graphs that the student draws
Abstract	Refers to abstract representations such as numbers and letters that the student writes

Example:

Tom had 3 apples. His mother gave him 4 more apples. How many apples did he have altogether?

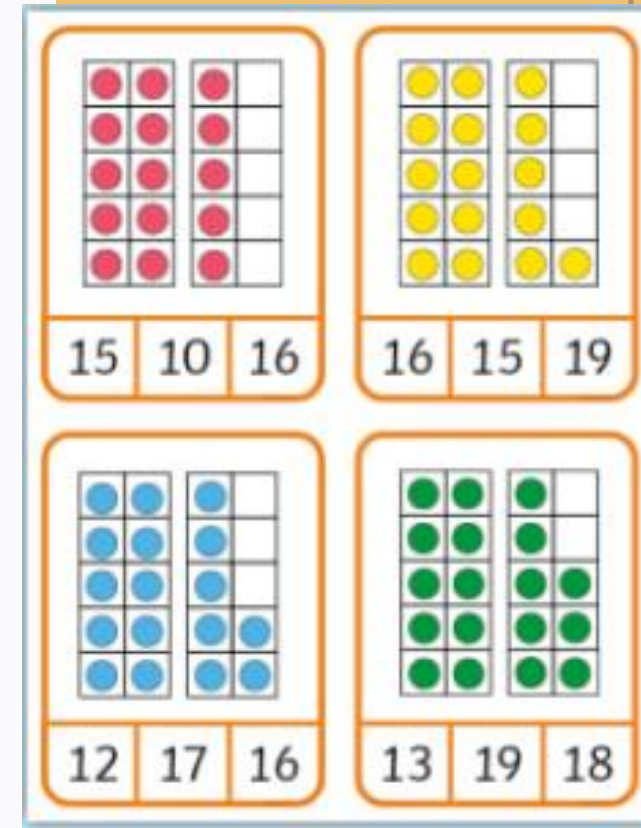
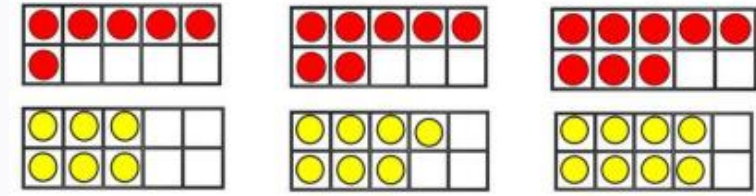
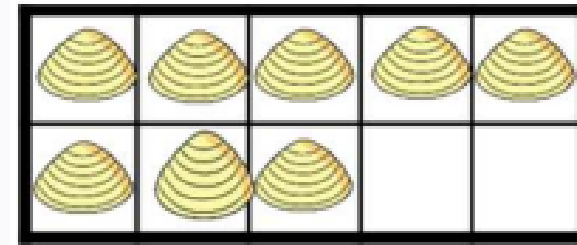
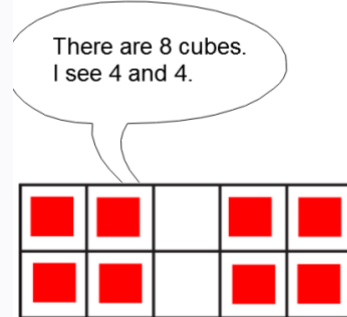
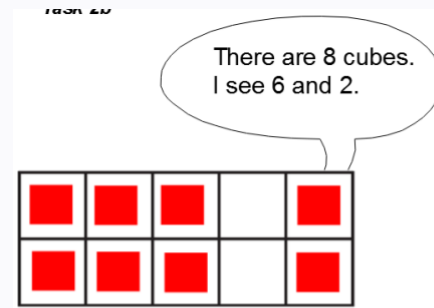


- This is the least important of all of them.
- They have to know the first two steps with a deep understanding before moving to the abstract.



TEN FRAMES

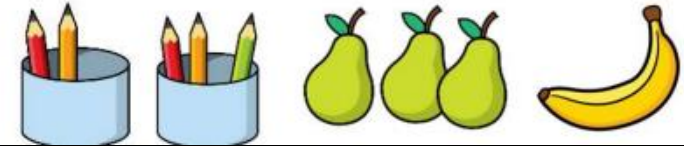
We use ten frames to show the children how a number is built. We talk about what they notice about the ten frame, such as how many squares have been filled and how many are left empty.



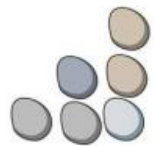
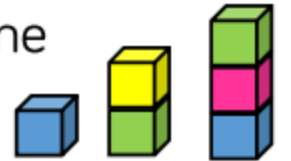
COMPARING NUMBERS

It is also important for the children to understand the relationship between each number. Here are some ways you can do that at home. Please remember you can use any objects.

Using a range of real objects in different contexts ask the children to compare sets. Which set has more? Fewer?
Can you find 2 sets with the same amount?



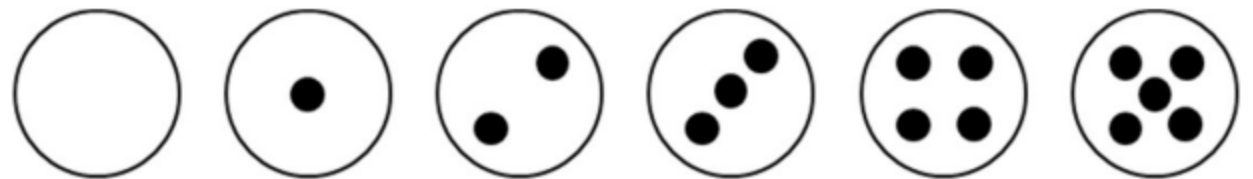
Represent the patterns using bricks or cubes to support the understanding that each number is one more/less than the number before.



Loose Parts

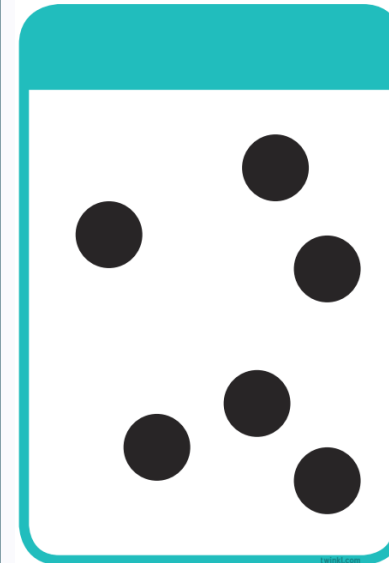
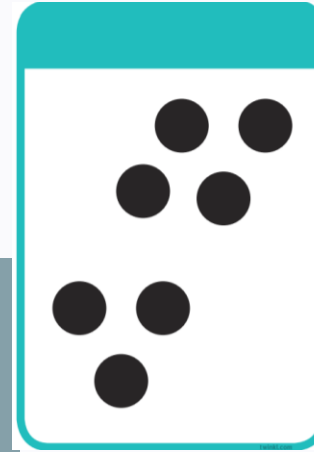
Provide an assortment of loose parts for the children to build their own one more/one less patterns.

Provide children with dot plates or cards from 0 to 5



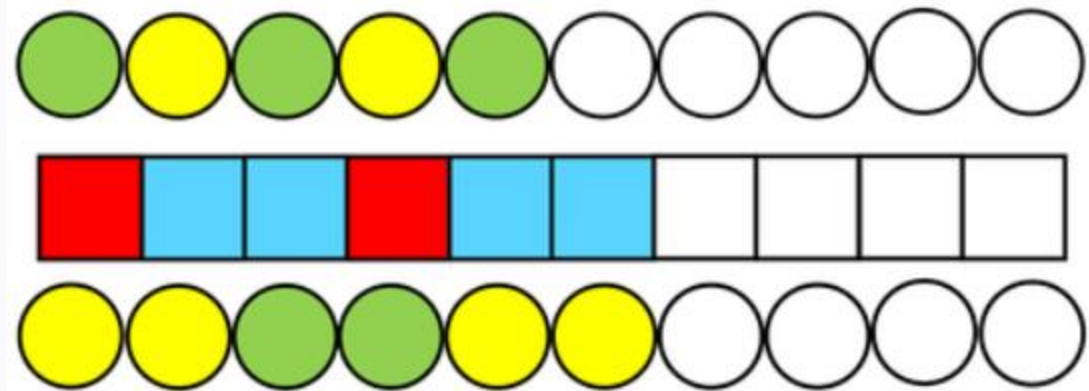
SUBITISING NUMBERS

Subitising is **when you are able to look at a group of objects and realise how many there are without counting**. This may start in the normal way, such as the dots on a dice, then move on to the dots in different arrangements.

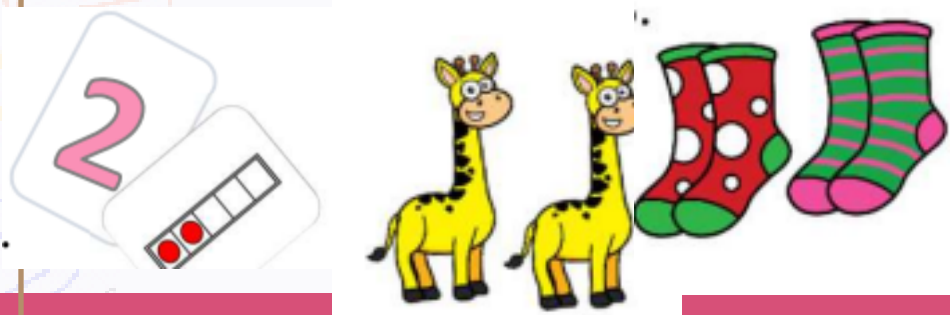


ABBA, ABAB- PATTERNS

Understanding patterns is a key part of maths, as it helps children to understand the rules of a pattern, which then they can relate to number. You can make patterns with all sort of objects at home.

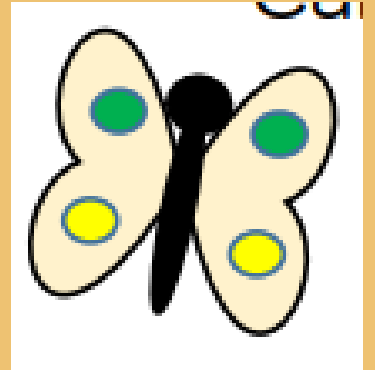
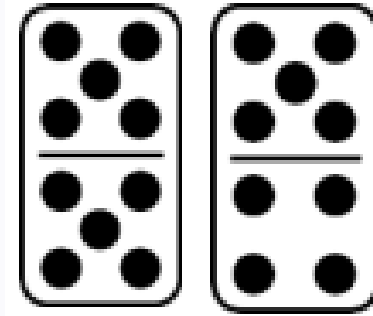


MAKING PAIRS

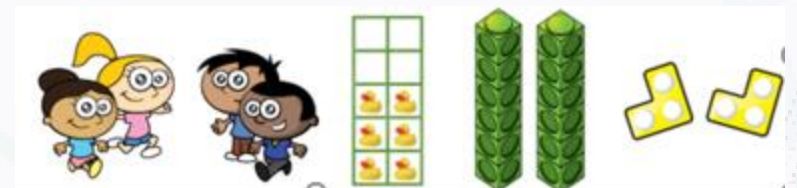


To help children understand pattern in numbers you can talk about odds and even numbers. To help them know the difference between odd and even number is, you can use socks to make pairs or ask your child to pair up toys, if they have an odd number, what do they notice?

Doubles



Children also need to know that double means the same amount added together. You can allow your child to explore different ways to build doubles using real objects and practical equipment. You can use dominoes, dots on paper, making a tower, using toys.



NEAR DOUBLES

After children have an understanding of doubles, we then build on it by talking about near doubles. This is why it is important for children to have a “basic” knowledge of numbers before moving on.

- $4 + 5 =$

$7 + 8 =$

$1 + 1 = 2$	$6 + 6 = 12$
$2 + 2 = 4$	$7 + 7 = 14$
$3 + 3 = 6$	$8 + 8 = 16$
$4 + 4 = 8$	$9 + 9 = 18$
$5 + 5 = 10$	$10 + 10 = 20$

- **What do we already know?**
What can we use to help us?

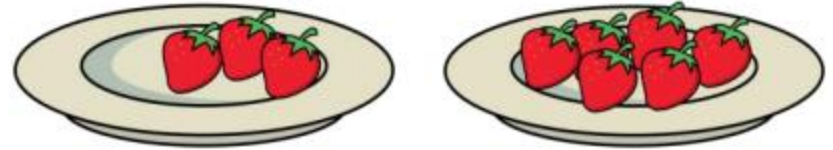
SHARING AND GROUPING- EYFS

Children should be able to share and group objects and understand that each part has to be equal.

Provide opportunities for your child to group objects in different contexts. For example, can they give each gingerbread man 3 buttons?

Can they place 5 cars on 3 plates. Can they arrange their pebbles into groups of 2? What about groups of 3?

Show the children a bowl of strawberries. Explain that you are going to share them into 2 equal groups so there will be half for you and half for your friend. Put a handful straight onto each plate without counting – make sure that one plate clearly has more strawberries than the other. Ask the children if it is fair. Prompt them to show you how to share the strawberries fairly. What if another friend arrives?



They could share out toys, or pasta. Prompt the children to notice that sometimes they can make equal groups and sometimes they have items left over.

ADDING

To help your child understand adding, it is best to use real objects to see that the quantity of a group can be changed by adding more. We use the "First, Then, Now" structure to help them understanding adding. This can be used in a number of different contexts. For example:

First you had, 4

Then we added 3.

Now we have 7.

Some children may need to re-count all of the items to see how many they have altogether, but when ready, support them to count on. Such as 4,5,6,7. Now we have 7.

They can also, use there fingers, or 10 frames, or a number line to help them add.

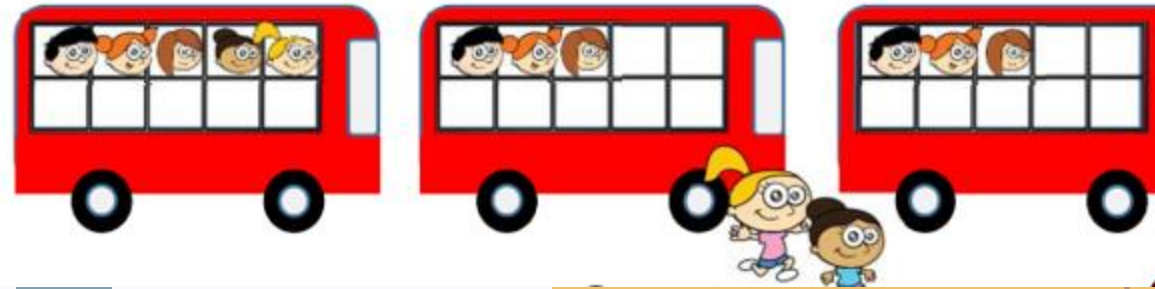
They do not need to know the - and = sign in EYFS!

This is brought in only in from Year 1.

We use the language of add/plus and equal to/same as/total.

SUBTRACTING

To help your child understand subtracting, you can ask your child to show you 5 fingers and then you 4. Prompt them to notice that one less is the same as taking away one. You can then extend this to taking away 3 fingers, or 4 and noticing how many are left each time. You can ask your children to physically remove items they are taking away and then count or subitise to see how many are left.



They do not need to know the - and = sign in EYFS!

This is brought in only in from Year 1.

We use the language of take away/minus/subtract and equal to/same as.

PLACE VALUE- KS1

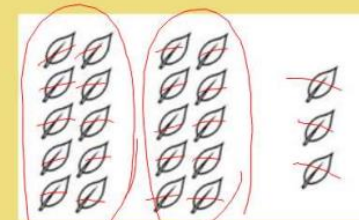
Children need to understand about place value. This is a vital part of maths and with this knowledge it will support them in nearly all other areas of maths. It is important for children to know what the next ten is, for example they should know that if they are on 23, the next ten will be 30, if they are on 45 the next ten is 50

Place value chart

Tens	Ones

is tens

= +



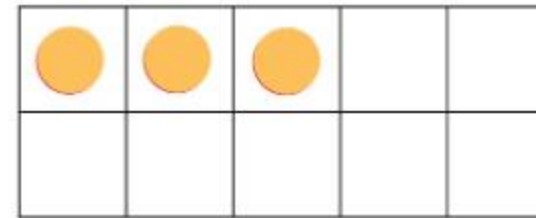
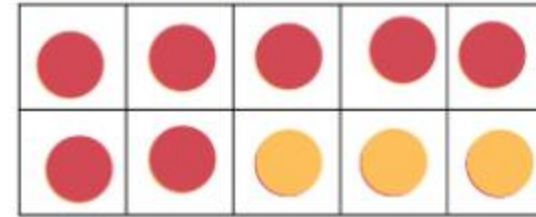
23 = 2 tens and 3 ones.

Tens	Ones
	...
2	3

THINK 10

- In Year 1 and 2, we teach children about "Think 10". This is where we ask children to think of their number bonds to the nearest 10, then add the rest.
- The skills of reasoning can be taught throughout the development of this strategy using sentence starters such as:
- I have noticed that... there are 3 gaps in the first ten... so we need to move 3 counters from the 6.
- I already know that... 7 and 3 more is ten... so I need to regroup the 6 into 3 and 3.

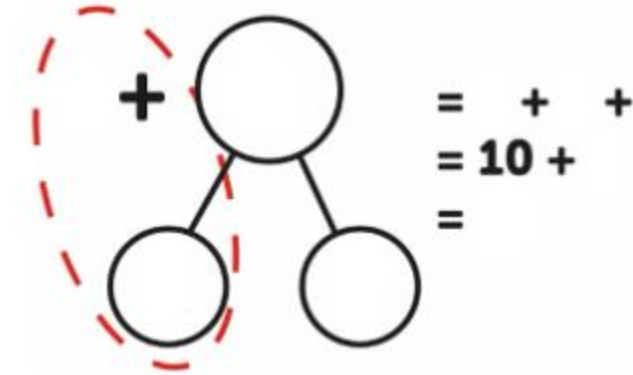
$$7 + 6 =$$



I can regroup into and

I can add to to "think 10"

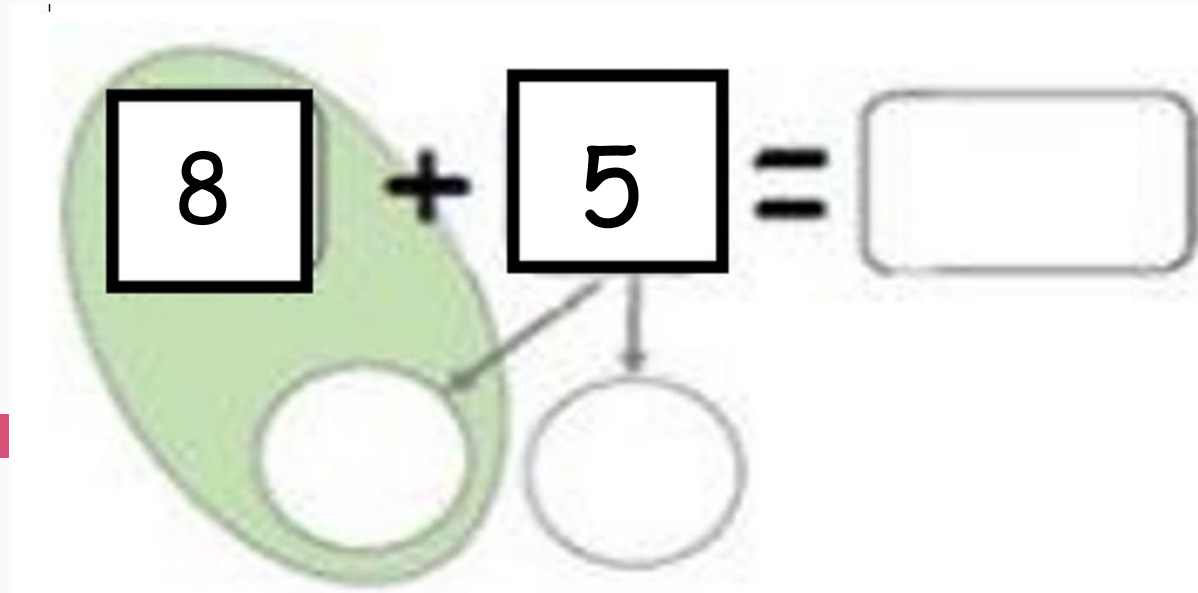
Then add to 10 to total



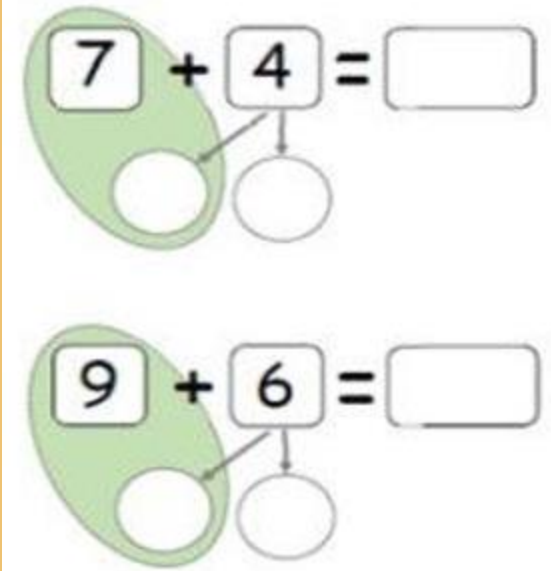
- think 10
- sum
- total
- add
- equal
- altogether

Herts

THINK 10

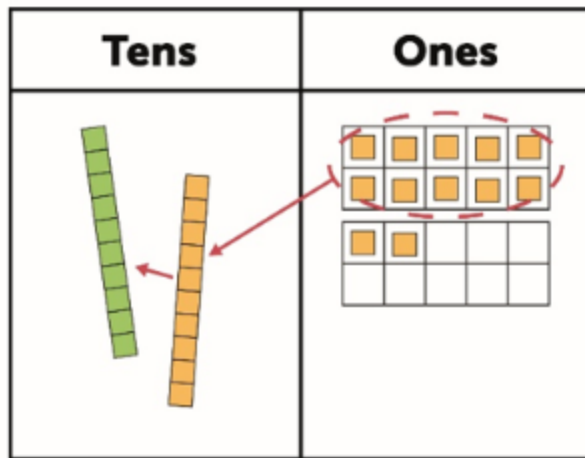


Show 8 and 5 on the bead string,



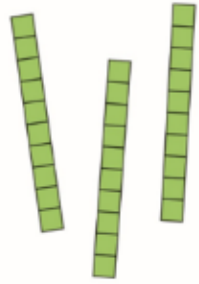
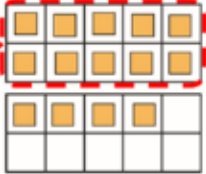
REGROUPING

To help develop their understanding of place value we teach the children about regrouping. This is mostly done in Year 2. However, without a deep understanding of number, they will find it hard to understand how to regroup.







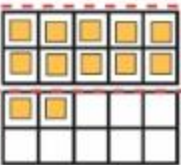
I have 12 made up of 12 ones.
I can regroup ten ones to make one ten.
I still have 12 but now I have 1 ten and two ones.






REGROUPING

Tens	Ones
	

I have 44 made up of 3 tens and 14 ones.
 I can regroup ten ones to make one ten.
 I still have 44 but now I have 4 tens and 4 ones.

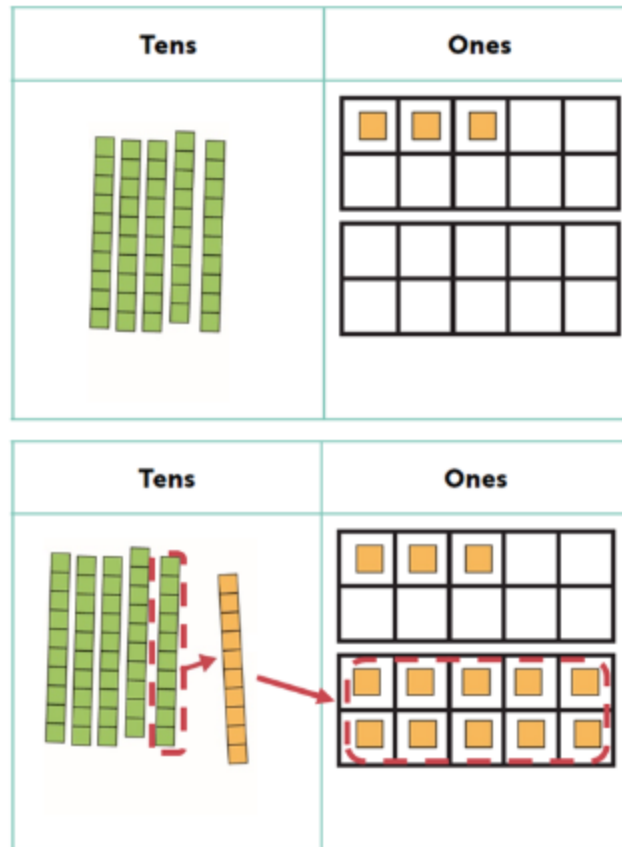
For example for $57 + 25$:

Tens	Ones
	
+	
	

Tens	Ones
	
+	
	

Tens	Ones
50	7
+ 20	5
80	12 2
10	

REGROUPING



I have 53 and I want to take away 9 ones.

53 has 5 tens and 3 ones.

That is not enough ones.

I will need to regroup a ten for 10 ones.

I still have 53 but I now have 4 tens and 13 ones.

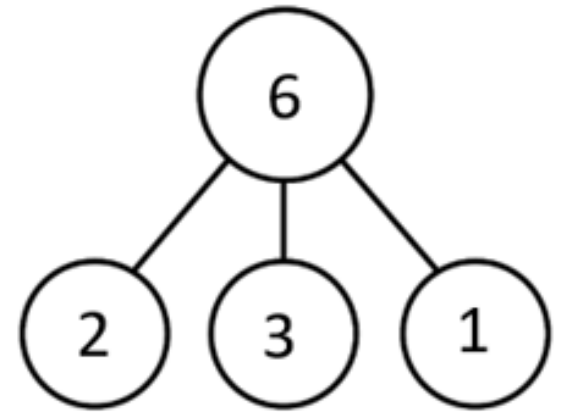
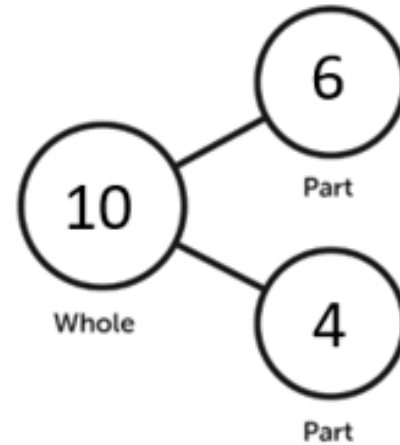
I can now take away 9 ones.

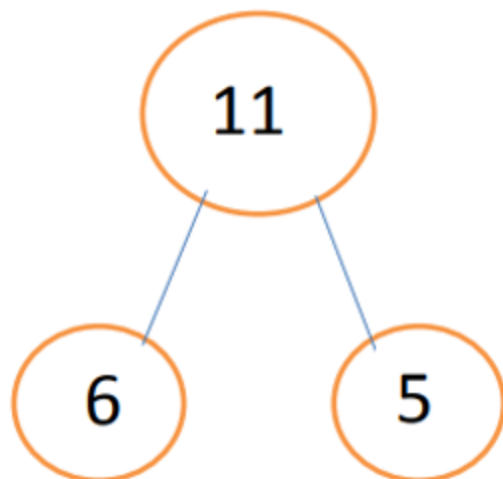
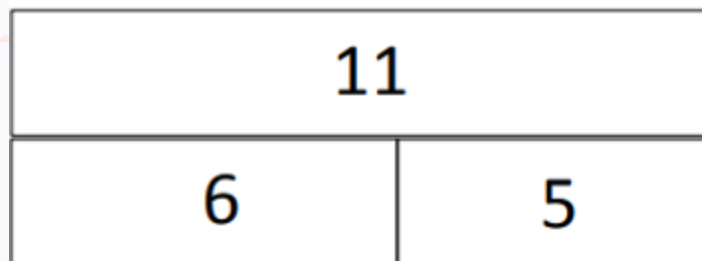
PART WHOLE MODEL

We use part whole models to help children understand the composition of a number. Again, this is vital in maths, for children to understand how a number is built. If they don't understand composition of number then gaps will appear in their learning.

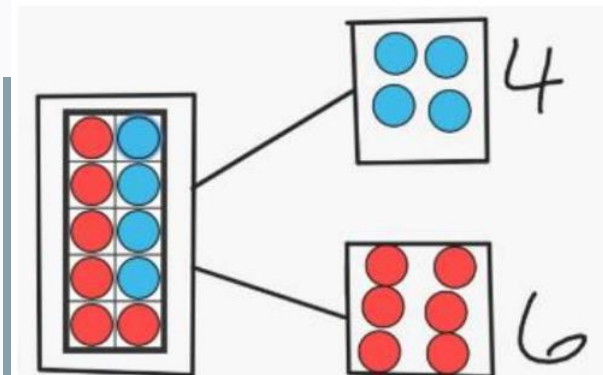
You can do this at home, it does not have to be digits you can use: toys, stones, pasta.

This is one of the most important things you can do with your child to help them understand number.





My whole is 11. One part is 6 and the other part is 5. 6 plus 5 is equal to 11.



$$\underline{4} + \underline{6} = \underline{10}$$

$$\underline{10} = \underline{4} + \underline{6}$$

$$\underline{10} - \underline{4} = \underline{6}$$

$$\underline{6} = \underline{10} - \underline{4}$$

My whole is 10. One part is 6 and the other part is 4. 6 plus 4 is equal to 10.

As you can see here, there are 4 number facts. Children need to be able to make the 4 number facts from a set of 3 numbers.

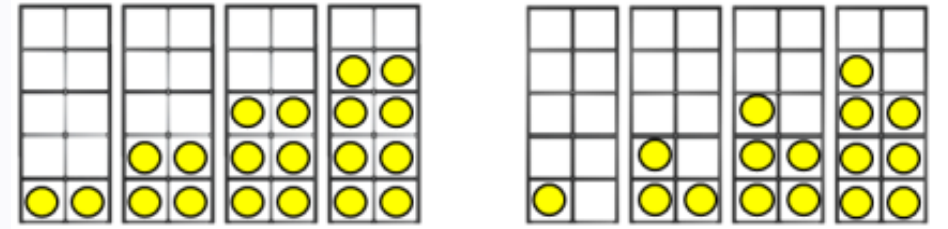
RELATED NUMBER FACTS

We work on relating their knowledge of numbers to try to answer other number sentences.

If I know, then I know.....

- **$3 + 7 =$**
- **$13 + 7 =$**
- **$23 + 7 =$**
- **$30 + 70 =$**

ODDS AND EVENS



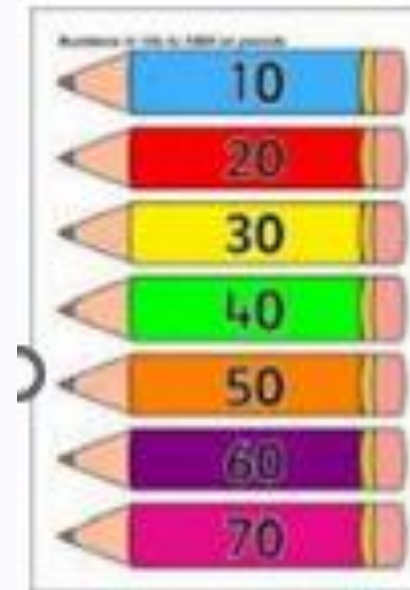
Children should understand that some quantities will share equally into 2 groups and some won't. They may also notice that some quantities can be grouped into pairs and some will have one left over. Provide opportunities for them to explore these ideas in different contexts as they play and to talk about what they notice. Encourage the children to notice the odd and even pattern of numbers. Encourage the children to notice the odd and even pattern of numbers, linking it to ABAB patterns.

You can use ten frames to help children understand that even numbers always have pairs, where as the odds have one left over.

Another way of showing odds and evens is Providing pots of items containing quantities from 1 to 10. Then asking your child to count the items in each pot and decide if there is an odd or an even quantity. How could they check? They could also make odd and even collections of their own.

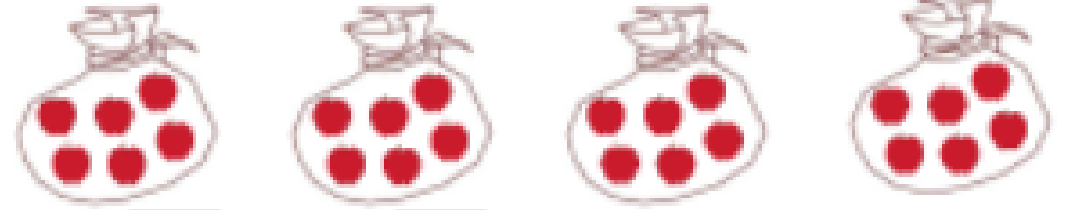
COUNTING IN 2,5,10

To help children understand pattern in numbers they need to learn how to count in 2s, 5s and 10s. There are a number of videos on Youtube to help your child learn how to count in these steps. Also, please use practical objects to assist your child in learning. Making it practical will help your child understand what adding 10 or 2 looks like. This will then help them learn it in more detail.



MULTIPLICATION

The x sign is not taught until Year 2. However, in Year 1 they still learn about multiplication, but it is called grouping and "lots of" and repeated addition.



I have 4 groups of 5 apples.
I have 4 lots of 5.
I have 20 altogether.

2. How many butterflies altogether?

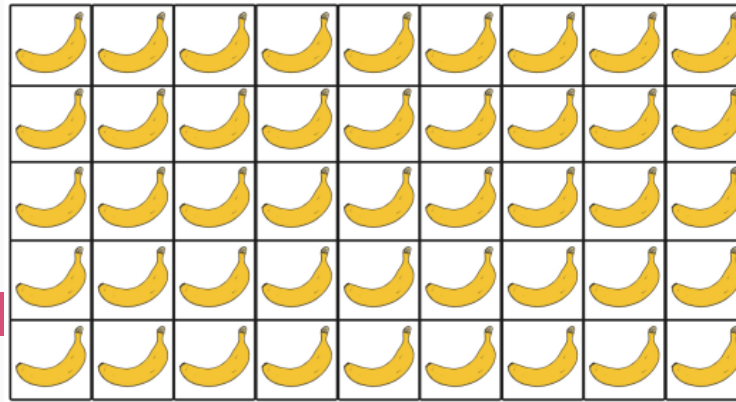


$$5 + 5 + 5 = \boxed{}$$

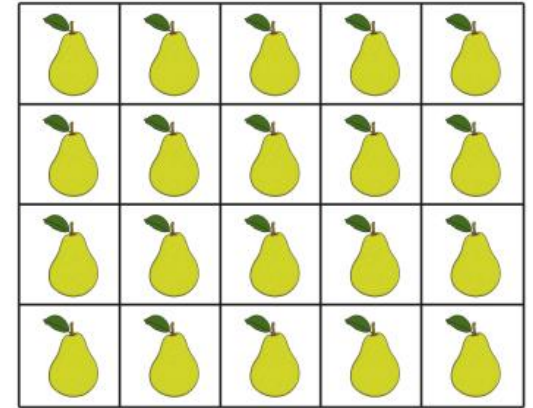
MULTIPLICATION

In Year 2 will look at arrays, this helps the children understand how multiplication works. It also develops their understanding that multiplication can be done in any order.

How many bananas are there?

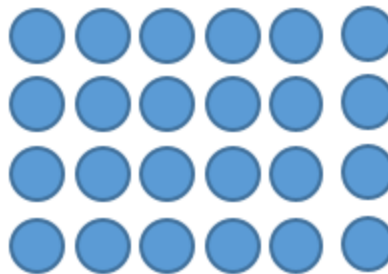


How many pears are there?



Commutativity

4 x 6, that has the same product as 6 x 4



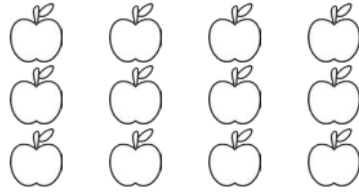


DIVISION

Children should be able to share and understand that each part has to be equal.

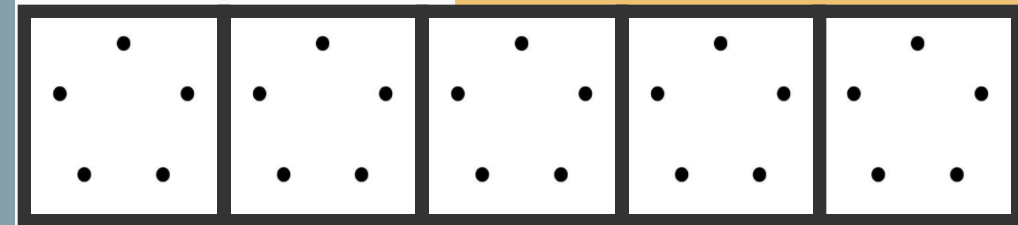
They could share out toys, or pasta. Prompt the children to notice that sometimes they can make equal groups and sometimes they have items left over.

Once they understand this, they can move on to learning about arrays to help with division.

The division symbol (\div) is not introduced until Year 2.

		
$12 \div 4 = 3$ $12 \div 3 = 4$		

We teach them to use arrays to help solve division number sentences and also we teach them to group numbers. For example $30 \div 5 =$. We would ask them to draw 5 circles and then share 30 dots between the 5 circles. Then ask them how many are in each circle.



MATHS FLUENCY SESSIONS

- For impact, fluency sessions should be:
- 10–15 minutes
- in addition to the maths lesson, where possible
- five key areas based on skills previously taught (not new learning)
- slides are repeated each session with a minor adaptation, to build fluency, and only changed once pupils are secure/fluent

I can partition numbers, to 10, into two groups
The aim is for them to recall these facts instantly.

Zero and ten make ten.
One and nine make ten.
Two and eight make ten.
Three and seven make ten.
Four and six make ten.
Five and five make ten.

Key Vocabulary
_____ and _____ make _____

Top Tips
The secret to success is practising little and often. Use time wisely. Can you practise these facts while walking to school or during a car journey? You do not need to practise them all at once; perhaps you could have a fact of the day. If you would like more ideas, please speak to your child's teacher.

Use practical resources –

- Using items around the house to find different ways of making 10, e.g. one blue teddy and nine red teddies.
- One and nine make ten.
- Making up stories with items around the home, e.g. there are 2 cars in the car park and 8 more cars arrive, how many cars altogether? Two and eight make ten.
- Asking questions during daily routines, e.g. you have 4 sausages on your plate and I have 6 sausages on my plate, how many sausages altogether? Four and six make ten.
- Jack Hartmann Number bonds to 10 singing and moving you tube clip.
<https://www.youtube.com/watch?v=iD9qBUixs0> Number bonds to 10
<https://www.youtube.com/watch?v=ch7Kz3n2Zk> Number pairs to 10

Year 1 Spring 2
I know doubles and halves of numbers to 10
The aim is for them to recall these facts instantly.

$0 + 0 = 0$
 $1 + 1 = 2$
 $2 + 2 = 4$
 $3 + 3 = 6$
 $4 + 4 = 8$
 $5 + 5 = 10$
 $6 + 6 = 12$
 $7 + 7 = 14$
 $8 + 8 = 16$
 $9 + 9 = 18$
 $10 + 10 = 20$

half of 0 = 0
half of 2 = 1
half of 4 = 2
half of 6 = 3
half of 8 = 4
half of 10 = 5

Key Vocabulary
What is double 9?
What is half of 6?

Top Tips
The secret to success is practising little and often. Use time wisely. Can you practise these facts while walking to school or during a car journey? You do not need to practise them all at once; perhaps you could have a fact of the day. If you would like more ideas, please speak to your child's teacher.

Ping Pong – In this game, the parent says 'Ping' and the child replies 'Pong'. Then the parent says a number and the child doubles it. For the harder version, the adult can say 'Pong' and the child replies 'Ping' then halves the number.

Year 2 Spring 2
I know the multiplication and division facts for the 10 times table.
By the end of this half term, children should know the following facts. The aim is for them to recall these facts instantly.

$10 \times 1 = 10$	$10 \div 10 = 1$
$10 \times 2 = 20$	$20 \div 10 = 2$
$10 \times 3 = 30$	$30 \div 10 = 3$
$10 \times 4 = 40$	$40 \div 10 = 4$
$10 \times 5 = 50$	$50 \div 10 = 5$
$10 \times 6 = 60$	$60 \div 10 = 6$
$10 \times 7 = 70$	$70 \div 10 = 7$
$10 \times 8 = 80$	$80 \div 10 = 8$
$10 \times 9 = 90$	$90 \div 10 = 9$
$10 \times 10 = 100$	$100 \div 10 = 10$

Key Vocabulary
What is 10 multiplied by 3?
What is 10 times 9?
What is 70 divided by 10?

They should be able to answer these questions in any order, including missing number questions.
e.g. $10 \times \square = 80$ or $\square \div 10 = 6$

Top Tips – The secret to success is practising little and often. Use time wisely. Can you practise these facts while walking to school or during a car journey? You do not need to practise them all at once; perhaps you could have a fact of the day.

Pronunciation – Make sure that your child is pronouncing the numbers correctly and not getting confused between thirteen and thirty.

Songs and Chants – You can find multiplication songs and chants online. You can also use Education City songs! and websites www.timetables.co.uk and www.timetables.me.uk

Test the Parent – Your child can make up their own tricky division questions for you e.g. What is 70 divided by 10? They need to be able to multiply to create these questions.

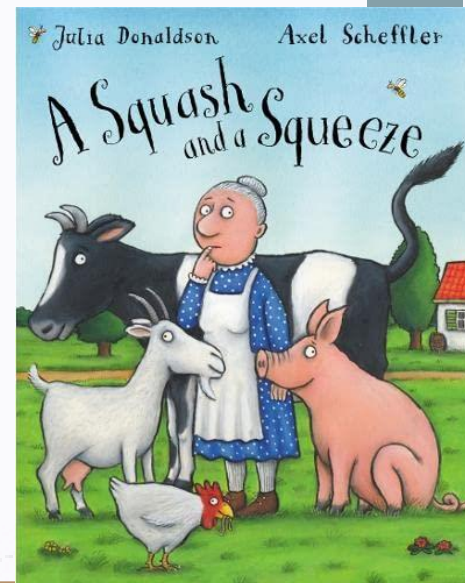
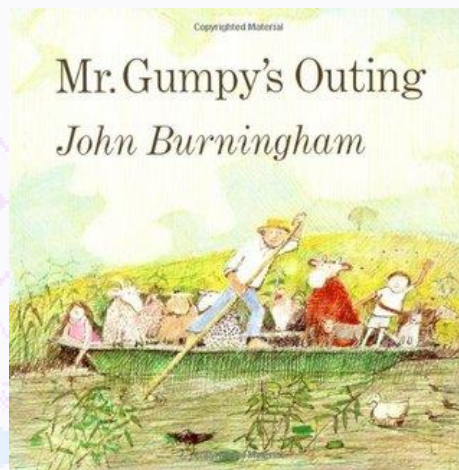
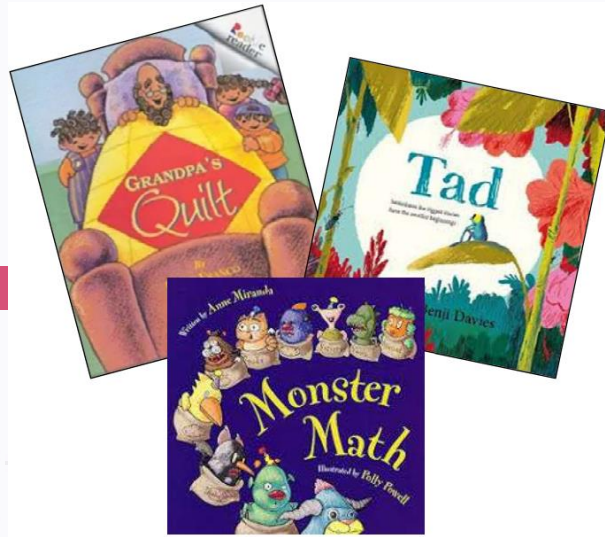
Apply these facts to real-life situations – How many toes are in your house? What other multiplication and division questions can your child make up?

MATHS REASONING

- Maths reasoning is about understanding how numbers fit together and thinking logically to find the answer.
- Explaining how they solved a maths problem is important because it helps them understand the problem better. When they explain how they found the answer, it helps them to understand the problem in greater detail and helps other people understand how they solved it too.

Maths reasoning is important because it helps you become better at problem-solving and understanding how numbers work together. It's like exercising your brain to become stronger and smarter in maths!

BOOKS TO LINK TO MATHS



KEY THINGS TO REMEMBER

- Maths happens at all times- without the children knowing it. It is not just them writing number sentences.
- Children NEED to know the composition of numbers, before they move on!
- Use any objects at home to help them with their maths.

What else can you do at home

- Play board games
- Cook – measuring and weighing
- Look at numbers in the environment e.g. telephone keys, number plates, door numbers, book pages, sleeps until Christmas!
- Money- looking at coins and notes.
- Comparing heights
- Birthdays, Months of the year, Days of the week
- Time-Morning, afternoon, night time. What time is bed time. What do we do in the afternoon? What do we do at night?
- Time-o'clock, half past, quarter past, quarter to, 5 minutes intervals.

SONGS



Nursery Rhymes & Kids Songs by Little Baby Bum - Volume 1 S1 E24
Five Little Speckled Frogs | Nursery Rhymes | from LittleBabyBum!



#fivelittlemonkeys #nurseryrhymes #kidssongs
Five Little Monkeys Jumping On The Bed | Children Nursery Rhyme | Flickbox Kids Songs



#nurseryrhymes #kidssongs #singalong
Over in the Meadow | Barefoot Books Singalong



Five Currant Buns In A Baker's Shop | 5 | NURSERY RHYME | RainbowRabbit | Counting Song |



Ten Fat Sausages Sizzling in a Pan - Nursery Rhymes



Let's all do the 10 dance (number bonds to 10 song)

SONGS



Counting by 2s
KidsTV123 4.37M subscribers
3.9K likes
Share Save



Counting by 3s
KidsTV123 4.37M subscribers
2K likes
Share Save



Counting Songs!
The Counting by Tens Song | Counting Songs | Scratch Garden
Scratch Garden 586K subscribers
7.7K likes
Share Save



Let's all do the 10 dance (number bonds to 10 song)



Counting by 5s
KidsTV123 4.37M subscribers
3.8K likes
Share Save



Hey 20 You've got a lot of friends (The Friends of 20) Album version
Rocking Dan Teaching Man 19.2K subscribers
638 likes
Share Save

WEBSITES

- <https://www.ictgames.com/mobilePage/index.html>



- <https://www.topmarks.co.uk/>



- <https://mathsframe.co.uk/en/resources/category/22/most-popular>



- <https://www.bbc.co.uk/bitesize/topics/zjkphbk/articles/zd4b382>



PLEASE MAY YOU COMPLETE
THE QUESTIONNAIRE.

**I HAD AN ARGUMENT
WITH A 90 DEGREE
ANGLE...**

TURNS OUT IT WAS RIGHT.



**1K5
MATH**

Maths

The only place
where
people
buy 64
watermelons
and
no one
wonders why...

