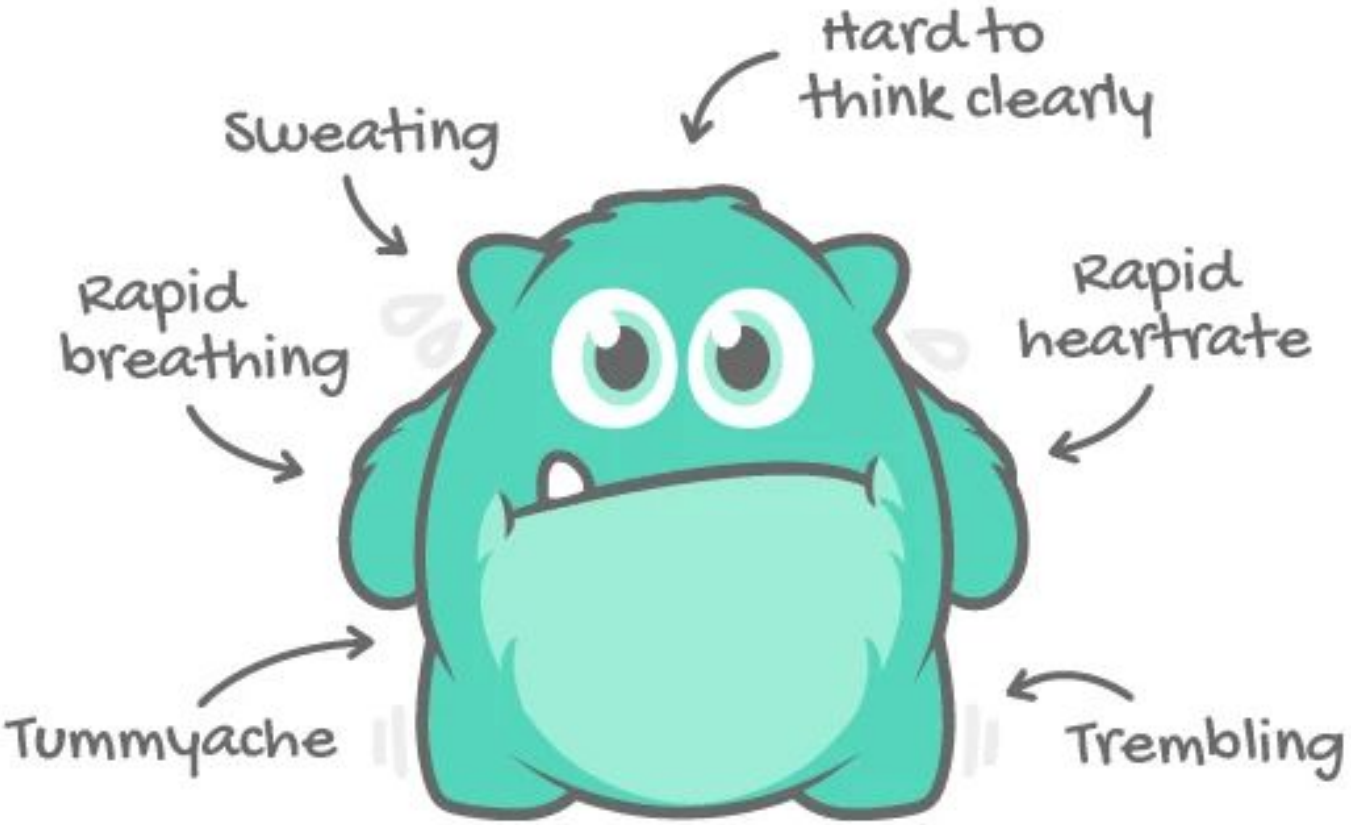
Maths Parent Workshop

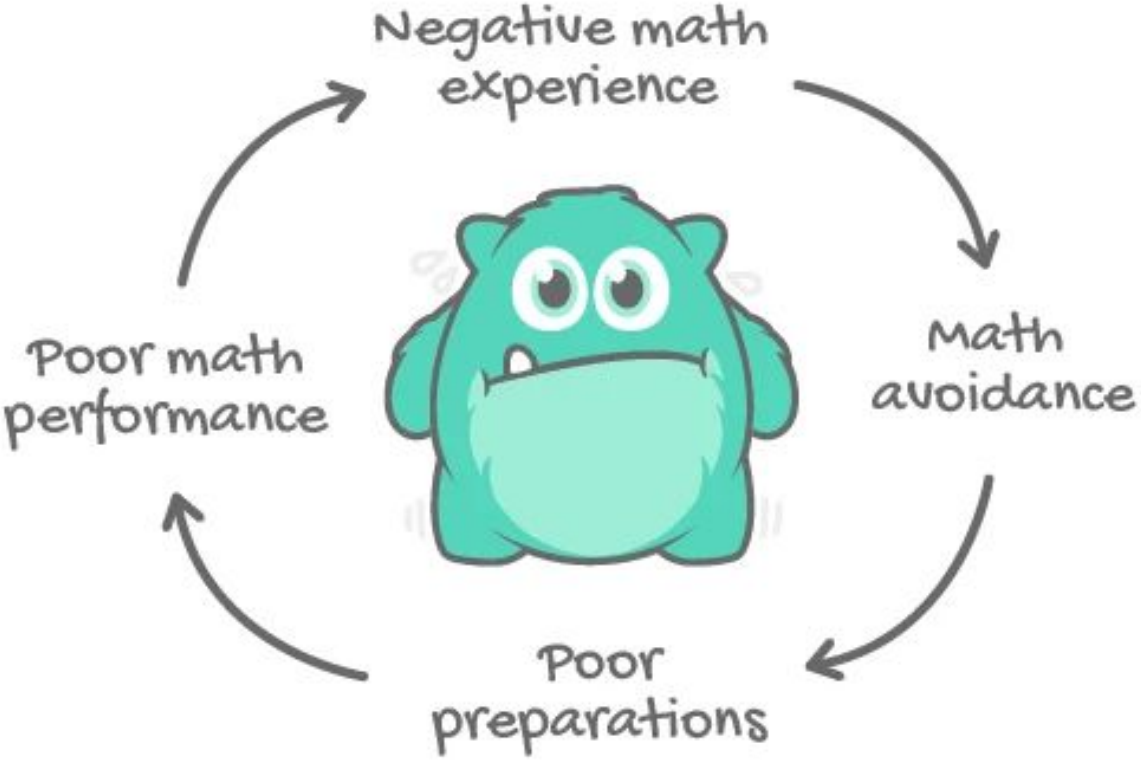
Welcome!

Purpose of meeting

- Share how Maths is taught at Rudston Primary
- Discuss the importance of using manipulatives
- Share ways to support your child with the subitizing and number sense
- Share resources to support your children in Maths


Hard to think clearly
Sweating
Rapid breathing
Rapid heartrate
Tummyache
Trembling

Math anxiety cycle of failure



This table shows how many people finished the New York Marathon in each of the first four decades it was held.

New York Marathon	
Decade	**Total number of people who finished**
1st decade	24,863
2nd decade	170,932
3rd decade	282,420
4th decade	350,824

What is the mean number of people who finished the marathon per decade? Round your answer to the **nearest hundred**.

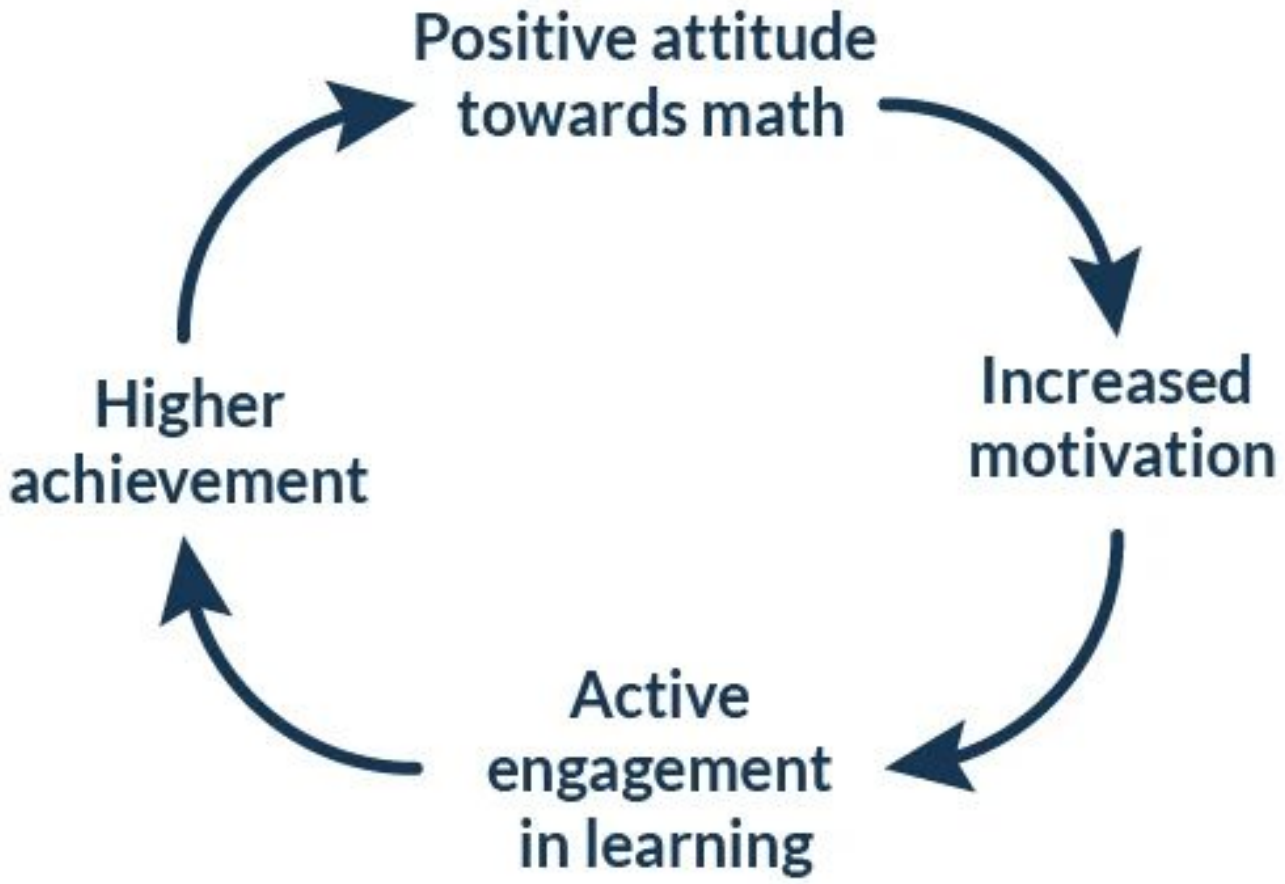
Maths at Rudston

Throughout Rudston, we encourage our children to view mathematics as a related subject that is very relevant to the world around them - not just within a classroom.

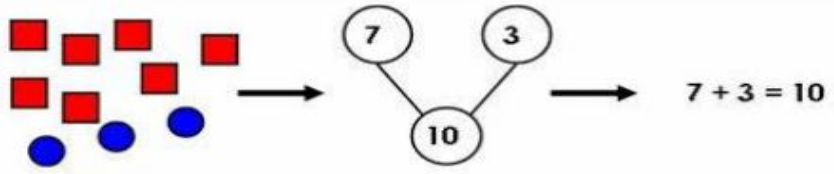
We ensure that our children understand the importance of mathematics in their everyday lives and realise the embedded mathematical links present within all other subjects.

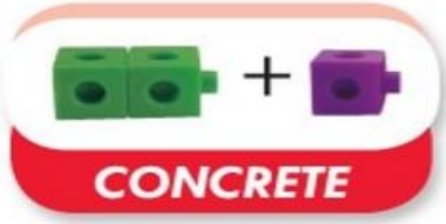
Our mathematical curriculum aims to instil a lifelong passion for reasoning and problem-solving in our children.

We want pupils at Rudston to enjoy maths. We want pupils at Rudston to see that, if they work hard, they can solve challenging problems, and we want pupils to see the value in everyday mathematics.


Positive attitude towards math
Increased motivation
Active engagement in learning
Higher achievement

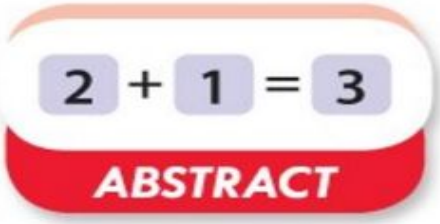
Maths approaches across the school





Concrete is the 'doing' stage, using concrete objects to solve problems. It brings concepts to life by allowing children to handle physical objects themselves.

Pictorial is the 'seeing' stage, using representations of the objects involved in maths problems. This stage encourages children to make a mental connection between the physical object and abstract levels of understanding, by drawing or looking at pictures, circles, diagrams or models which represent the objects in the problem.



Abstract is the 'symbolic' stage, where children are able to use abstract symbols to model and solve maths problems.

Maths in Reception

By the end of Reception children should be able to ...

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 does this look like through the year?

Reception use the scheme White Rose Maths - link to website on our class page.

- There are three week long topics that get progressively more challenging.
- Term 1 - children learnt about matching, sorting, three sided shapes and the composition of number.
- Currently (Term 2) - children learn about capacity, 3D shapes and number bonds to 10.
- Term 3 - children will learn about sharing, doubling, halving and numbers beyond 10.
- The children have four maths lessons per week and complete one task.

They also have a maths challenge to complete and a maths area in both classes and outdoors. Maths is also brought into other areas of play such as weighing scales in the home corner and tape measures in the construction area.

Basic Skills

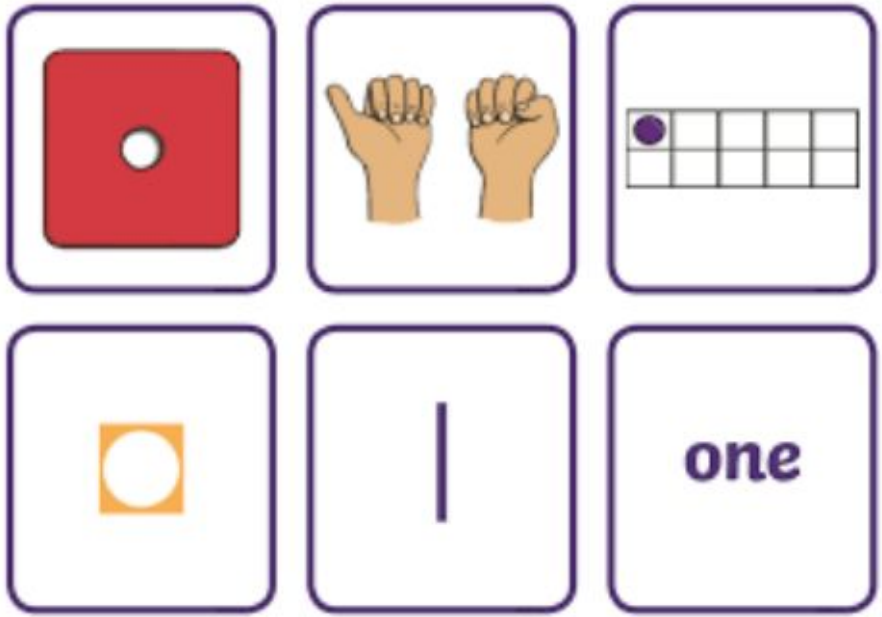
Reception have four separate maths basic skills sessions following the NCETM programme ‘mastering number’. The children will continue these basic skills sessions in year 1 and 2.

The aims of these are:

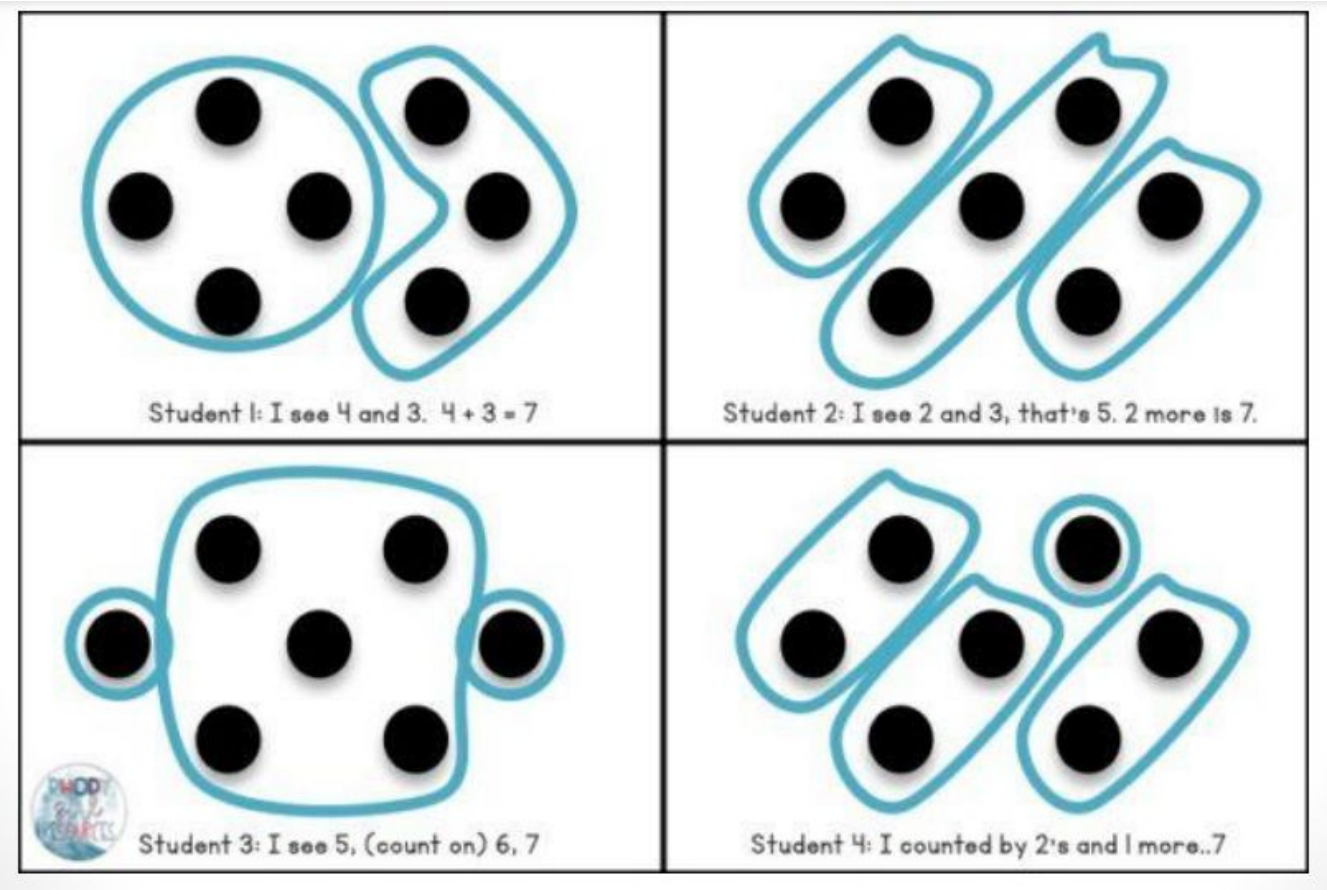
- the children will be able to clearly communicate their mathematical ideas
- they will build firm mathematical foundations for future learning
- teaching strategies focused on developing fluency in calculation and number sense for all children
- the use of appropriate manipulatives to support the teaching of mathematical structures

Representing Number

- Dice
- Tally
- Ten Frame
- Number Cards
- Numicon
- Fingers
- Real world - e,g road signs, door numbers, buses

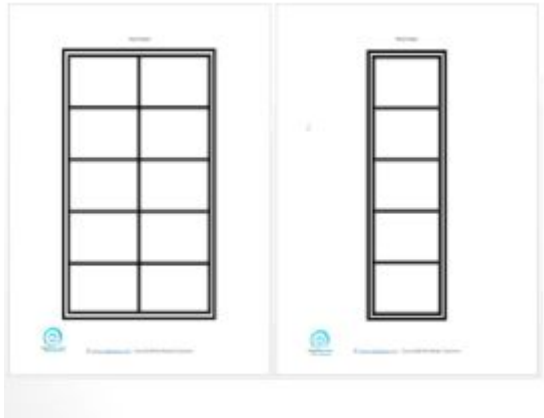


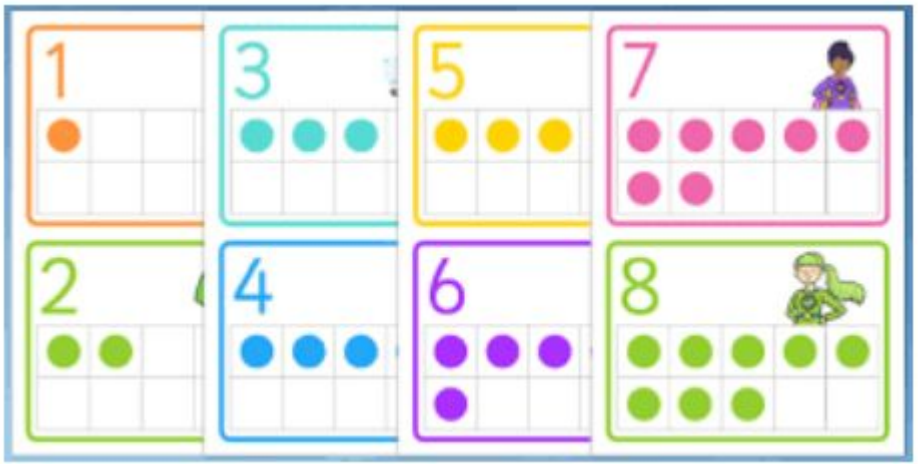
Subitizing


Student 1: I see 4 and 3. 4 + 3 = 7
Student 2: I see 2 and 3, that's 5. 2 more is 7.
Student 3: I see 5, (count on) 6, 7
Student 4: I counted by 2's and 1 more..7

Number Sense

5 frames and 10 frames are excellent ways to help your children build their number sense. By placing numbers in a 5 or 10 frame they can start to see what numbers look like. They start to understand that when I place 3 teddies on the 5 frame there are 2 spaces missing. That then helps children to make the connection that 3+2=5 and 5-2=3.

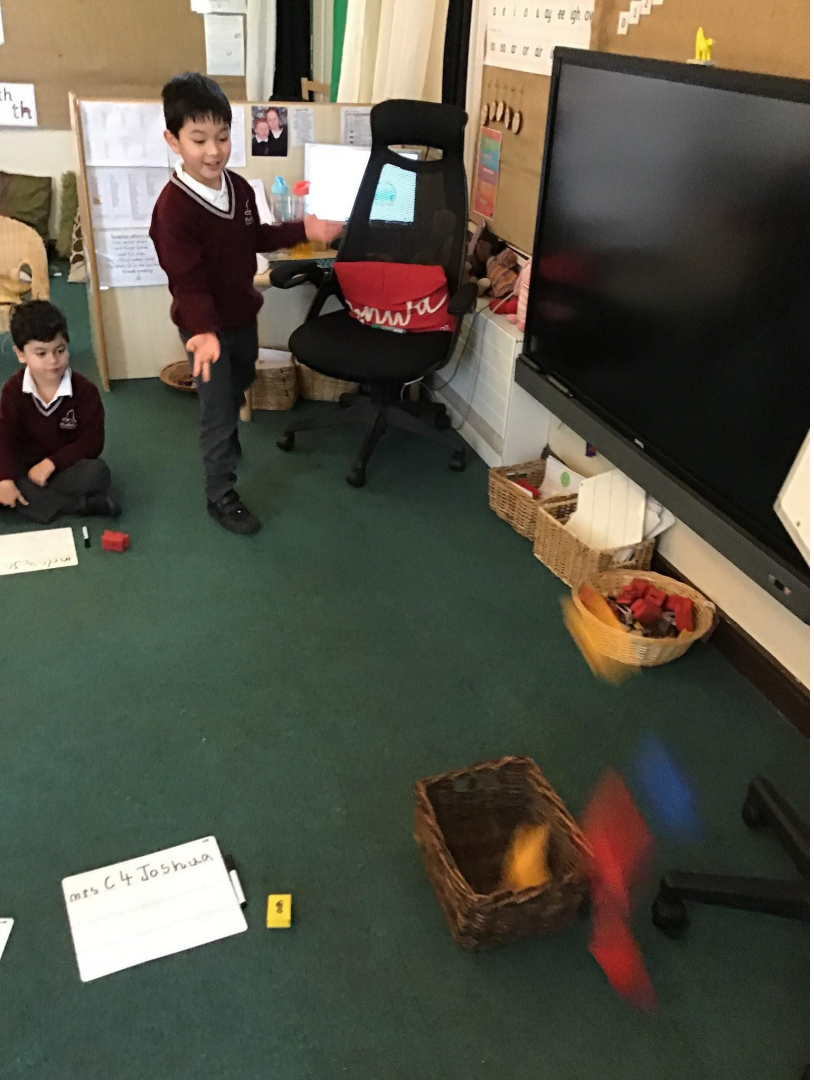


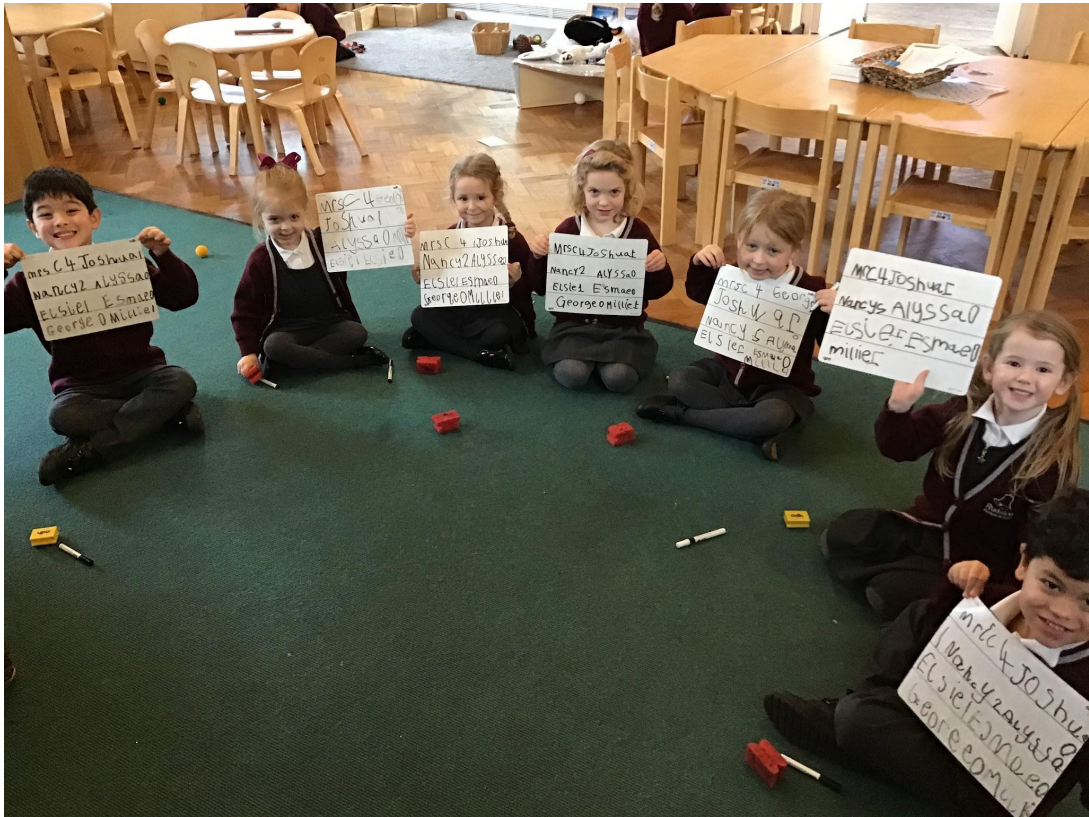


Sentence Stems

It’s very important that children can speak about their maths understanding.

- ‘Yes that’s right you have **fewer** than me.’
- ‘Put on your ‘**pair’** of socks.’
- ‘There is **1 ten** and **6 ones**. The **total is 16**.’
- ‘If I add **1 more** than there will be 6 cakes.’


mrs C 4 Joshua


mrs C 4 Joshua
Nancy2 ALYSSA0
Elsie1 Esmae0
George0 Millie1
MrsC4Joshua
Nancy2 ALYSSA0
Elsie1 Esmae0
George0Millie1
MrsC4Joshua
Nancys ALYSSA0
Elsie1 Esmae0
millie1

Patterned Socks Pairing
Cut out the socks and put them in matching pairs

Progress Paths

https://drive.google.com/drive/folders/15Kp7TnKangD-NsnS3KX1PKGk_cQModSQ?usp=share_link

Maths no problem - What is it? Why?

Singapore has become a “laboratory of maths teaching” by incorporating established international research into a highly effective teaching approach. With its emphasis on teaching pupils to solve problems, Singapore maths teaching is the envy of the world.

- Singapore consistently top the international benchmarking studies for maths teaching
- A highly effective approach to teaching maths based on research and evidence
- Builds students’ mathematical fluency without the need for rote learning
- Introduces new concepts using Bruner’s Concrete Pictorial Abstract (CPA) approach
- Pupils learn to think mathematically as opposed to reciting formulas they don’t understand
- Teaches mental strategies to solve problems such as drawing a bar model

Maths No Problem Lesson

All children are introduced to the mathematical language they will be using in the lesson. This supports the children when explaining their reasoning to the class.

Here is an example from a year 1 lesson. The objective of the lesson is to solve a subtraction sentence by counting back.

It is important pupils are able to understand and use the following mathematical terms and phrases in this lesson:

- How many are left?
- count back, counting backwards
- number story
- number sentence
- minus
- subtract
- equals

Sentence Starters

- There are ___ _____ altogether/in total. Sam takes ___ _____. ___ minus ___ equals ___. There are ___ _____ left.

Maths No Problem Lesson

A question is asked for the whole class to think about and explore. This is an opportunity for the children to link prior learning strategies and to explore new strategies.

Explore

There are 7 carrots altogether.
Sam takes 3 carrots.
How many carrots are left in the bag?

How many carrots does Sam have to begin with?

How many does Sam take away?

There are ☐ carrots in total. Sam takes ☐ carrots.

☐ - ☐ = ☐

What ways do we know already that can help us solve this question?

Maths No Problem Lesson

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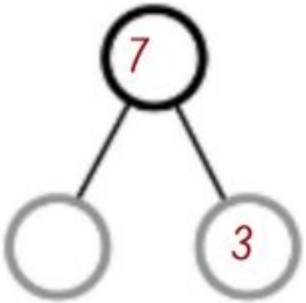


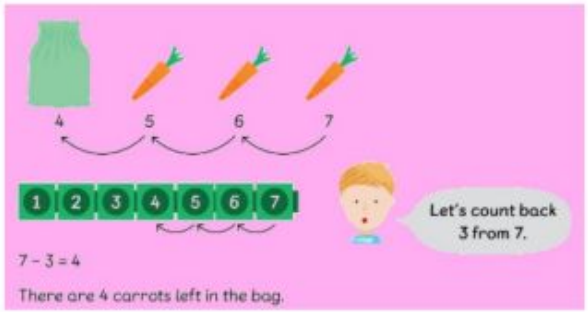
Maths No Problem Lesson

7 - 3 =

Can we help Sam count BACK 3 from 7?

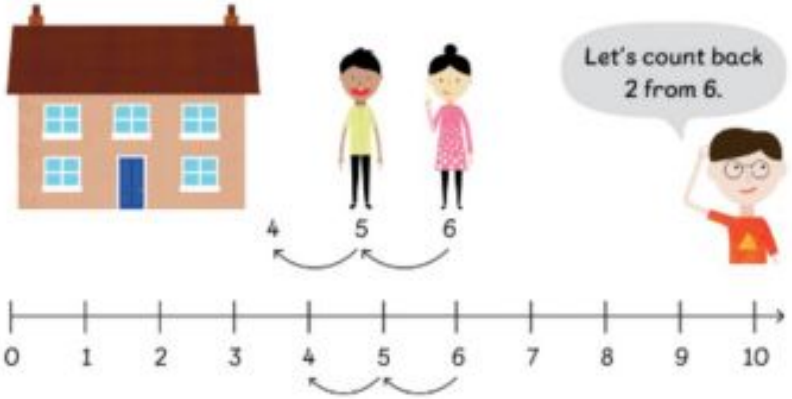
Let's do this together!

There are ☐ carrots altogether. Sam takes ☐ away.
☐ minus ☐ equals ☐. There are ☐ carrots left.



Maths No Problem Lesson

6 friends are playing together.
2 of the friends are playing outside.
How many friends are playing in the house?



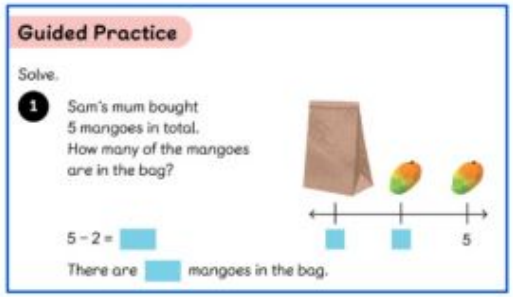
6 − 2 = 4

There are ____ friends playing in the house.

The children are then given the opportunity to practise the new method as a class or with a partner.

Children are provided with number lines to support this learning.

Maths No Problem Lesson

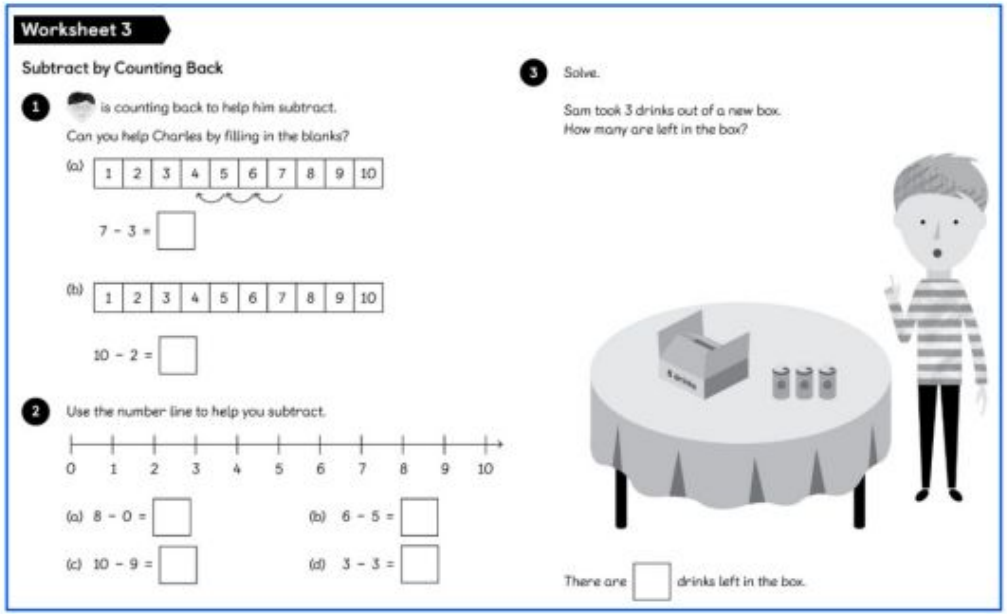


Guided Practice

Solve.

1. Sam's mum bought 5 mangoes in total. How many of the mangoes are in the bag?

Guided practice provides the children to work in pairs and for the adults to assess who will need more support.



Worksheet 3

Subtract by Counting Back

1. is counting back to help him subtract.

Can you help Charles by filling in the blanks?

(a) 1 2 3 4 5 6 7 8 9 10

7 − 3 =

(b) 1 2 3 4 5 6 7 8 9 10

10 − 2 =

2. Use the number line to help you subtract.

0 1 2 3 4 5 6 7 8 9 10

(a) 8 − 0 =

(b) 6 − 5 =

(c) 10 − 9 =

(d) 3 − 3 =

3. Solve.

Sam took 3 drinks out of a new box.
How many are left in the box?

There are drinks left in the box.

Worksheets are independent.

At home - all maths is good maths

The NCETM is amazing! It has everything you could possibly want. • I'll show you an example of a Reception activity.

- https://www.ncetm.org.uk/classroom-resources/ey-numberblocks-at-home/

• White Rose is also a brilliant website. That has free home learning videos for Reception aged children.

• https://whiterosemaths.com/homelearning

Homework

https://play.edshed.com/en-gb/login

https://play.numbots.com/?#/game

Questions and feedback