

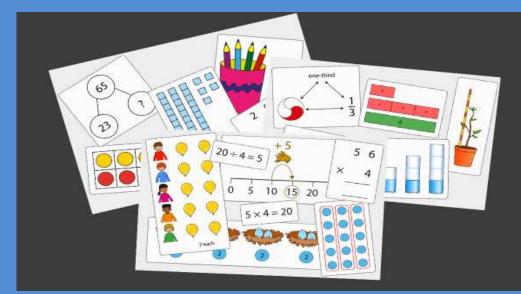
## Our Lady's Primary School

# EYFS & KS1 Parent Workshop

## Objectives for today



- promote "I can if I work hard " attitude
- understand teaching for mastery
- approaches and strategies
- helping at home
- questions



## Do not be afraid ...of Maths.



#### Let's play a couple of games



higher / lower compare numbers



dominoes- sibitise







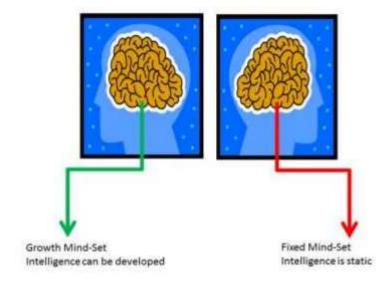
Discuss 3 positive and negative experiences of Maths you had when you were a child.



If children hear 'I can't do maths' from parents, teachers, friends they begin to believe it isn't important

People become less embarrassed about maths skills as it is acceptable to be 'rubbish

at maths'



## Fixed vs Growth mindset Carol Dweck



We believe that everyone can get better at maths...when they put in the effort and work at it.

- Do not praise children for being clever when they succeed at something, but instead should praise them for working hard.
- Children learn to associate achievement with effort (which is something they can influence themselves by working hard!), not 'cleverness' (a trait perceived as absolute and that they cannot change).



# The curriculum is designed so that pupils explore Mathematical idea in depth.

Number – number and place value

Number – addition and subtraction

Number – multiplication and division

Number - fractions

Measurement

Geometry – properties of shape

Geometry – position and direction

Statistics (Year 2 only)



## What does it mean to master something?

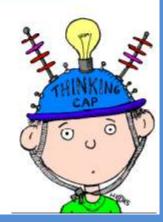
- I know how to do it
- It becomes automatic and I don't need to think about it- for example driving a car
- I'm really good at doing it painting a room, or a picture
- I can show someone else how to do it.



Fluency = how fast a person can retrieve correct maths facts to working memory from storage memory.

#### What are the implications for this?

Storing in Long term Memory needs lots of rehearsal, repetition and regular retrieval.



Example of mastery approach.



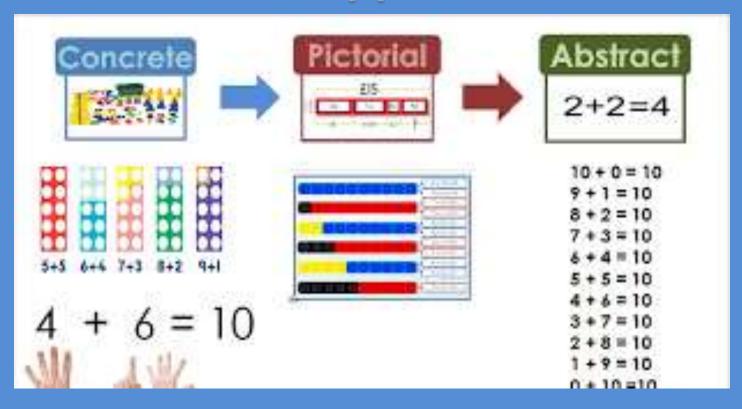
# Which is the odd one out, and why?

5 10 12

To answer and explain we need lots of solid foundations.



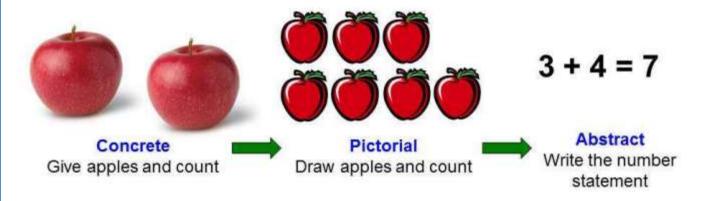
#### **CPA Approach**





#### Example:

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







#### Resources you can use at home

smarties counters



3D shapes







counting Bears



anything you have a lot of!



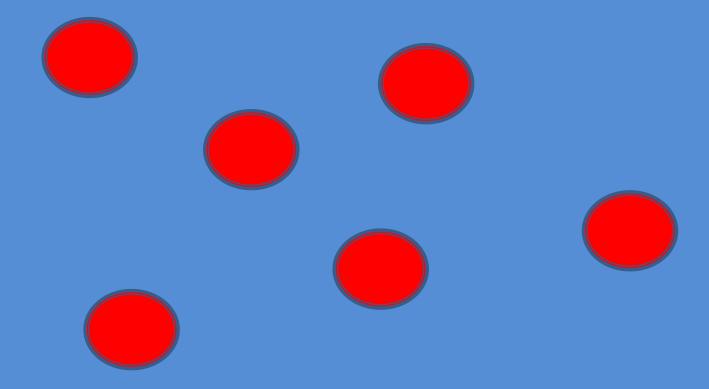






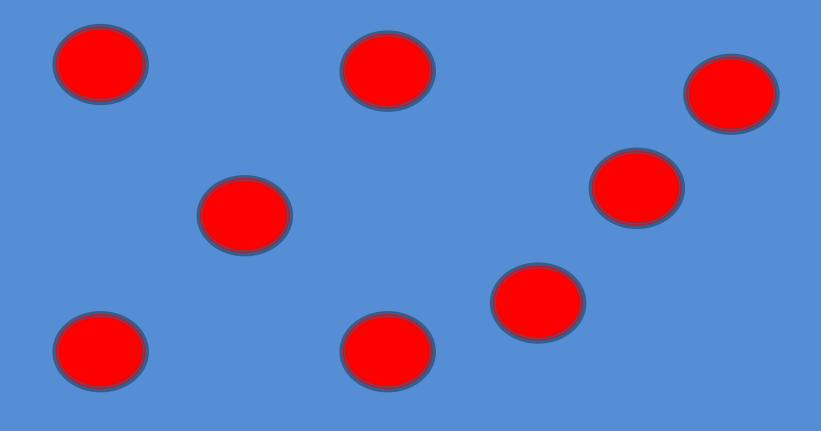
## Sibitising





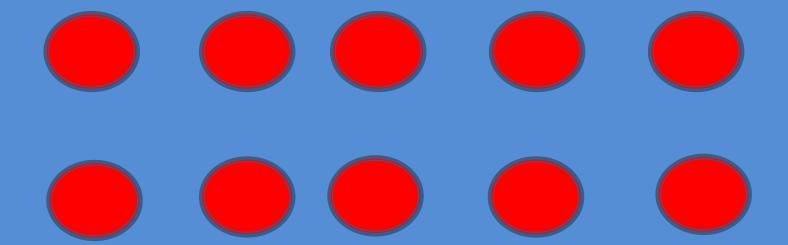
## Sibitising





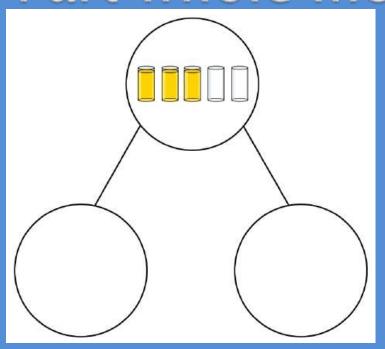
## Sibitising

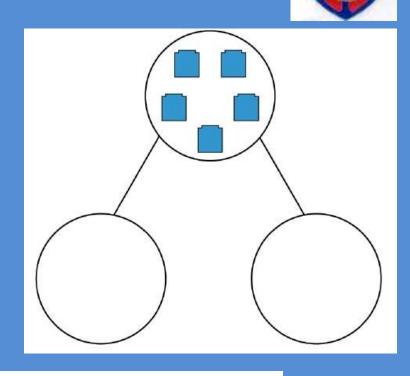


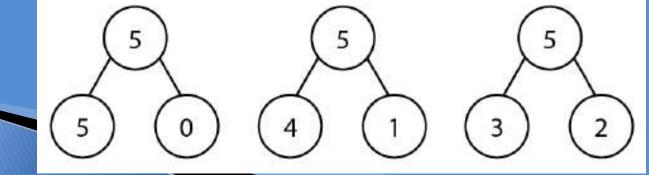


### Key models and images used in KS1

#### Part whole model

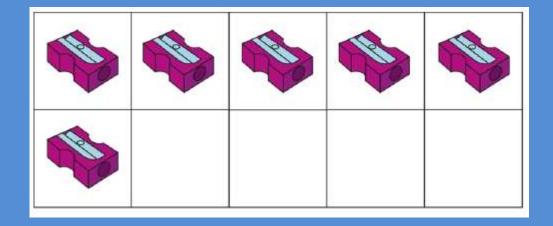


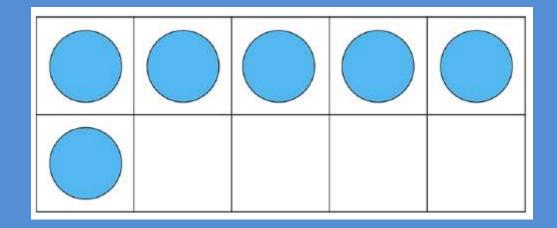




## Ten frame

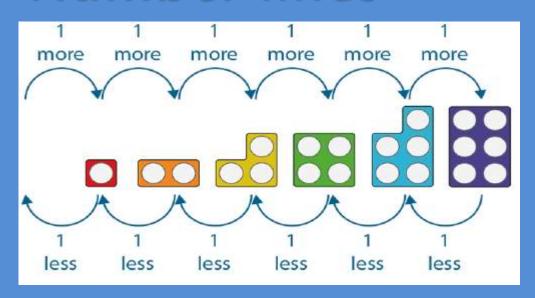


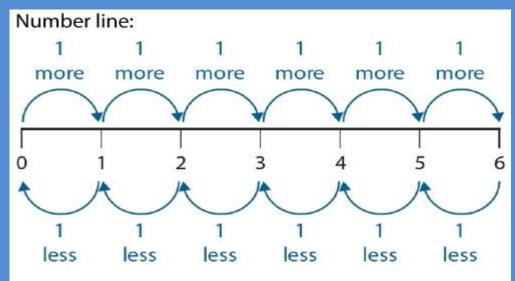




#### Number lines





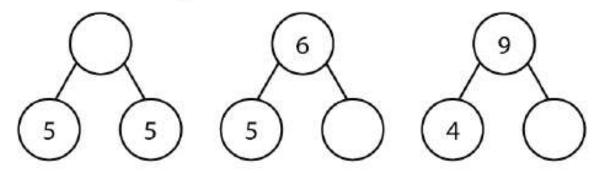


## Building fluency for mastery



#### Part-part-whole questions:

'Fill in the missing numbers.'



#### Story-based problems:

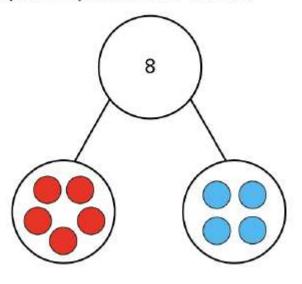
- 'I clap five times. How many more claps before I've clapped seven times?'
- 'I have eight house points to award. I've awarded five.
   How many do I have left?'

## Reasoning and explaining

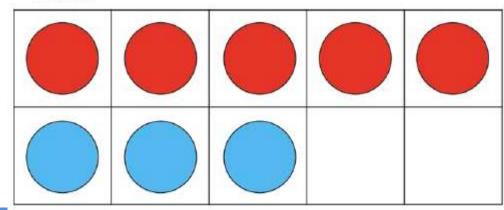


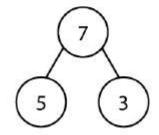
#### 'True or false' problems:

The two parts represent the whole.'



 The part–part–whole model matches the tens frame.'

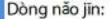




 'I clap five times. If I clap three more times, I will have clapped nine times.'

## Problem solving and proving





'Here are some school bags.'



 'Jay writes down the following expression to describe the bags:

5 + 2

Sally writes 4+3.

Joel writes 2 + 5.

Who is right?"

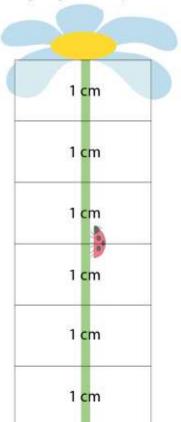
 'Can you write down another expression to describe the bags?'

## Putting it in context



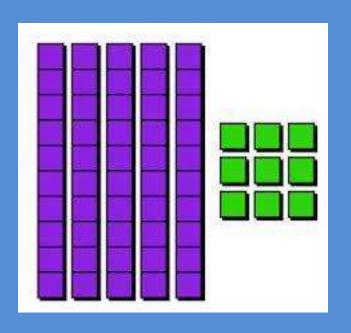
#### Measure context:

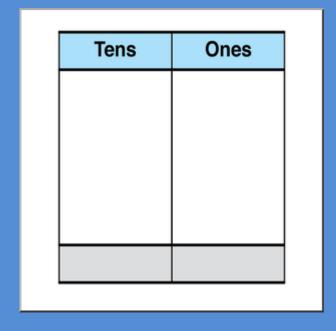
'A flower is six centimetres tall and the ladybird is three centimetres up the flower. How much further does the ladybird need to go to get to the top?'





# Understanding place value to 100





# Good foundations lead to the ability to deal with more complex calculations later on



$$34 + 25 =$$

$$49 - 25 =$$

$$24 \times 2 =$$

$$36 \div 3 =$$

## To be fluent we need to know the number facts



How do we do this....?

Lots of practise! Short and regular rather than long and irregular.







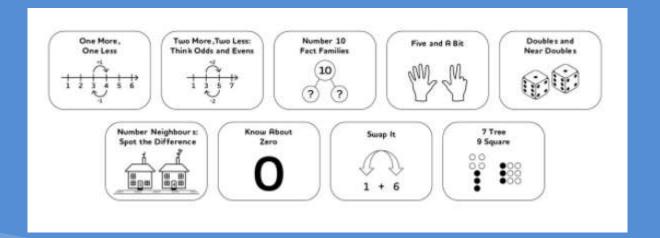
- Fluency is key
  - Number facts
    - Including subtraction facts as well.
    - Doubles and halves
  - Skip counting
  - Times tables
- Practise, practise, practise!
- Other activities can include:
  - Practise writing number formation
  - Match words to numbers
- Think and talk like a mathematician

## Play lots of maths games



#### Let's have a go at some:

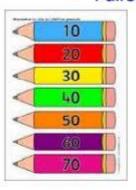
- ping pong
- make me a number
- total two dice / cards
- tell me a story



### **Keep Counting!**

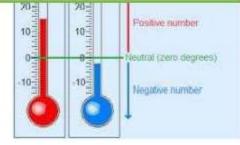


- Backwards and forwards in 1s, 2s, 5s, 10s, 100s.
  - Count with money.
  - Pairs











#### Number line ideas

Draw a line. Mark 0 and 10 (or any number range needed). Roll a dice. Decide where that number would go and write it in. Repeat. You can also start at any number and include whatever your child needs.



#### Inbetweenies



Start by asking for a 2 digit number. Place it at the start of the line. Now ask for a higher 2 digit number and place at the end of the line. Now keep asking for numbers in between.

### Tug of war – Nrich website



One player is called "PLUS"

The other is called "MINUS" so decide who is who.

Plus moves from left to right and Minus moves from right to left. (The children may be encouraged to think about why that might be.)

Take it in turns to throw the two dice and add up the numbers on the two dice.

Move that number of places in your direction.

If the counter reaches 1, Minus has won and so, of course if the counter reaches 27, Plus has won.





#### Times tables

**2**s

5s

10s

3s

4s (from the 2s)

6s (from the 3s)

#### Other ideas





**Follow a recipe:** work together to find out the quantities needed, ask your child to weigh the ingredients, discuss how you'd halve or double the recipe and discuss the ratio of ingredients.

**Talk about the weather forecast:** is today's temperature higher or lower than yesterday's? What do the numbers mean?

**Going shopping:** talk about the cost of items and how the cost changes if you buy two items instead of one. Let your child count out the coins when paying and discuss the change you get back. Use coins to explore addition, subtraction, multiplication and division.

**Planning an outing:** discuss how long it takes to get to the park, and so work out what time you need to leave the house. Encourage your child to work out the best solution based on the time and distances. Discuss what shapes you see when you get there.



## Please try not to....



#### Don't expect them to understand after you've explained it once.

 It is normal for a child to 'get it' one day, and then in a different context not know how to find an answer

#### Don't tell them you are hopeless at maths

You may remember maths as being hard, but you were probably not hopeless, and even if you were, that implies to your child, "I was hopeless at maths, and I'm a successful adult, therefore maths is not important"

#### Don't get into an argument over homework.

— It will be something that your child has covered in class, and if they really can't do it without a lot of tears and frustration, leave it and LET US KNOW!

#### Please do...



#### Play (maths) with your child

There are opportunities for impromptu learning in games with real people that you can't get from an ipad or DS!

Let your child win or be better than you! Otherwise all they learn is that you are better at maths than them



#### Recognise that there is more than one way of doing calculations

 You may have learned one method, but children are actively encouraged to seek out alternative methods in school and choose one which works for them, no matter how long winded.

#### Be an actor!

Get excited about maths and your child will get excited too.



## Please check our Calculation Policy on the School Website Calculation Policy

Sumdog - logins set up for children in Y1 and Y2

TTRS Rockstars — multiplication focus

**Topmarks -** various games <a href="https://www.topmarks.co.uk/maths-games/7-11-years/mental-maths">https://www.topmarks.co.uk/maths-games/7-11-years/mental-maths</a>

NRICH — more challenging thinking <a href="https://nrich.maths.org/primary">https://nrich.maths.org/primary</a>

### Thank you for listening

