

Year 1 and 2 Maths parent workshop

Explain and demonstrate how mathematics is taught in Year 1 and 2

Understand what is meant by 'Mastery' in mathematics.

Identify how fluency impacts upon achieving mastery.

Increase confidence and understanding in supporting your child at home.

<https://www.menti.com/>



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

**Which is the odd one out,
and why?**

5

10

12



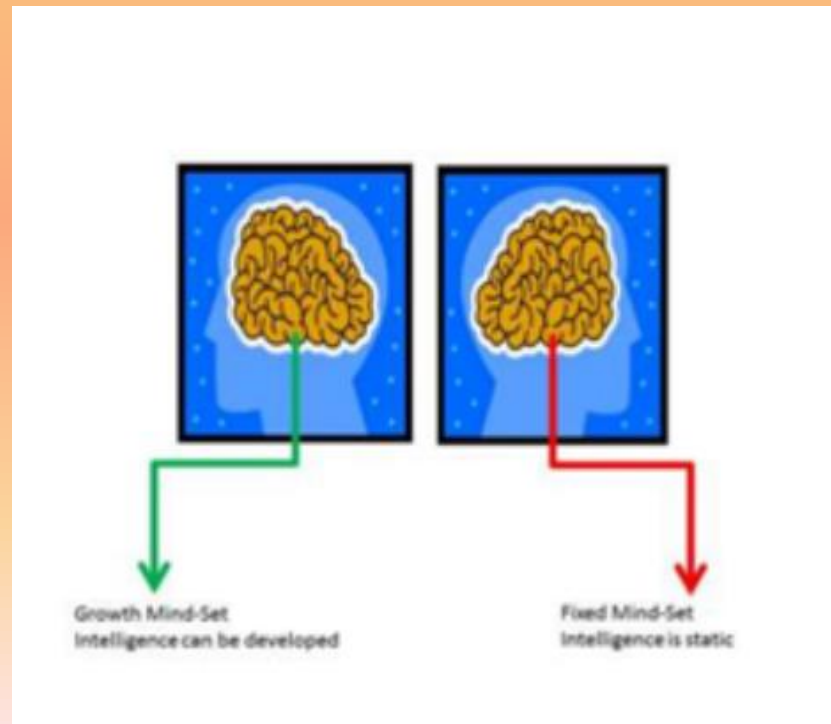
A Conversation between Patrick (aged 4) and Mark (professor in teaching of mathematics):

- ☐ Mark: What is four and one more?
 - ☐ Patrick: Six
 - ☐ Mark: What is four giraffes and one more?
 - ☐ Patrick: Five giraffes
 - ☐ Mark: What is four elephants and one more?
 - ☐ Patrick: Five elephants
 - ☐ Mark: What is four and one more?
 - ☐ Patrick (looks him in the eye): Six.
-



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’



KS1 statutory curriculum

The curriculum is designed so that pupils explore mathematical ideas **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)

- **Mastery** curriculum
- Reading and spelling of mathematical vocabulary

Speaking and listening

- Vocabulary
- Questioning
- Full sentences with sentence scaffolds
- Reasoning and explanation
- Problem solving



How do you know?
Can you show me?
Prove it to me...
Can you show me in a
different way?

23

I know 23 has 2 tens and 3 ones.

2×10



$2 \times 10 = 20$. I know this because two lots of 10 are twenty or ten add ten equals twenty.

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.

Example of a talk task

Link between concrete, pictorial and abstract

<p>Ahmed has 12 pencils.</p> <p>Ahmed divides the pencils equally between 6 pupils.</p> <p>How many pencils does each pupil have?</p> <p><input type="checkbox"/> <input type="radio"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p>	
<p>Asha has 8 flowers.</p> <p>She shares them equally between two teachers.</p> <p>How many flowers does each teacher have?</p> <p><input type="checkbox"/> <input type="radio"/> <input type="checkbox"/> <input type="radio"/> <input type="checkbox"/></p>	

We are learning to recognise the relationship between numbers in division equations.

Divide 12 books into groups of 2.



There are 12 books altogether. We are dividing 12 into groups of 2. I am going to group the unifix in twos, 2, 4, 6, 8, 10, 12.



Divide 12 books into groups of 2.



There are ____ groups of 2.

$$12 \div 2 = \square$$

There are 6 groups of 2. 12 divided by 2 is equal to 6.

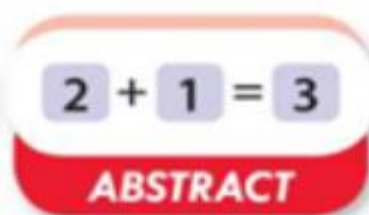
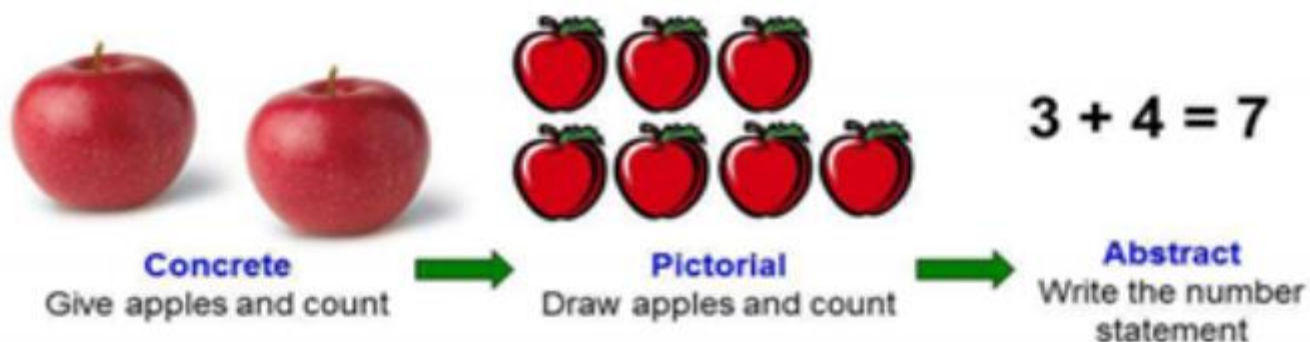


Note the focus on language and 'self-talk' through maths.

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?



How can you help at home?

- 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**

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.



How do we do this....?

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



Times tables

- 2s
- 5s
- 10s
- 3s
- 4s (from the 2s)
- 6s (from the 3s)

Fingers game

Videos

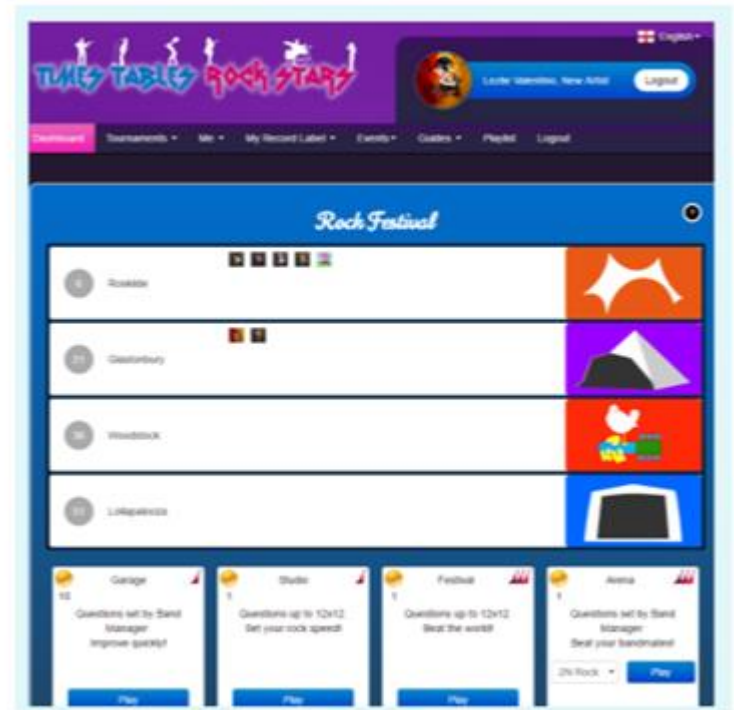


Watch the Video

Fun games

Mathemagician Andrew Jeffrey shows us how to use games to practise times tables.

[Watch the video](#)





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.

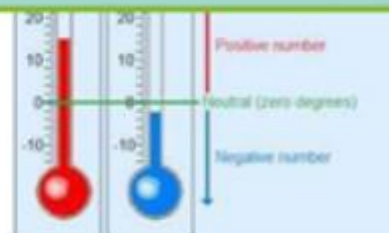
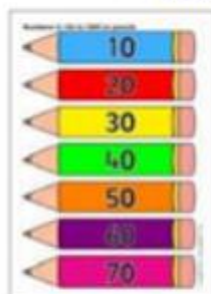
Inbetweens



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.

■ Backwards and forwards in 1s, 2s, 5s, 10s, 100s.

- Count with money.
- Pairs



Tug of war nrich

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.

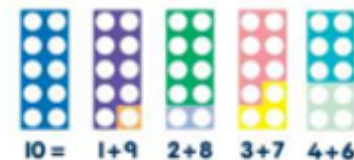
Move that number of places in your direction.

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



Web sites to use for practising fluency and other resources...

- Oxford Owl Maths
- NNS parents tool kit
- Top Marks times tables
- Maths is fun
- [Woodlands resources](#)
- Free numicon resources
- Nrich [website](#)



Dice Games



<http://www.sowevalleyprimary.co.uk/documents/DiceGames-plus.pdf>



DICE GAMES
Cover the Windows



You will need:

- 2 players
- A quantity of counters for both players
- 2 dice (1-6 spots or numbers)
- A window game board

The window game board consists of two windows with identical numbers. Players sit side by side and play on their own window.



How to play:
Players take turns to roll both dice, they add



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 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 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!

Ideas taken from Maths for Mums and
Dads Eastaway, R. and Askew, M. (2010)

Chinese Bamboo



When you plant it, nothing happens in the first year, nor in the second year or the third or the fourth years. You don't even see a single green shoot.

And yet, in the fifth year, in a space of just six weeks, the bamboo will grow nine feet high.

The question is, did it grow nine feet in six weeks or in five years?