How do we teach Maths at Middleforth?

PARENTS WORKSHOP

MONDAY 28TH NOVEMBER 2022

First of all…. A disclaimer!

- In today's workshop, we will:

- Discuss the 3 main areas of the National Curriculum for Maths
- Talk about the mastery approach
- Talk about a typical Maths lesson
- Show you our Maths curriculum
- Share some resources that we use in school
- Share some resources that you can use at home
- Share some useful websites
- Share some useful games/activities that you can try out at home

Why do we learn Maths?

- Always draw out real life links to Maths around your home
- Talk about how you use Maths in your job!
- Point out that their dream job involves Maths!
- Be positive about Maths!

There are 3 main strands in the Maths National Curriculum

- Fluency
- Reasoning
- Problem solving

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)

- Our lessons aim to involve all 3 skills every single lesson.
- Maths is so much more than providing the correct answer!

Our Maths Curriculum

- Where can we find it?
- We follow the Mastery approach (inspired by the Maths taught in Singapore)
- We use ‘White Rose’ to help us to sequence and plan our lessons.

The mastery approach:

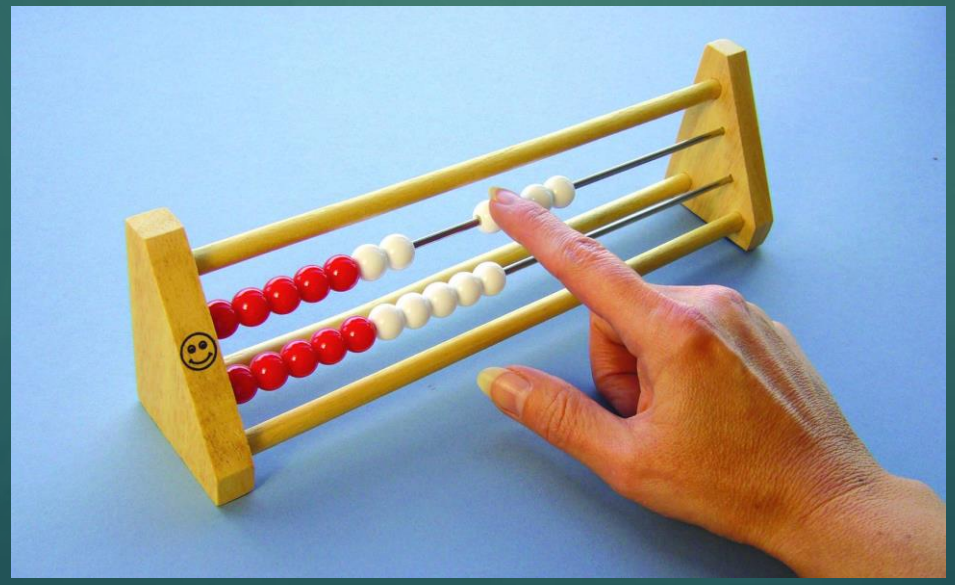
- Everyone can succeed at Maths!
- We break down concepts into 'small steps.'
- We explain Maths concepts using visuals and equipment.
- We give the children lots of short tasks 'the ping pong approach.'
- We provide the children with 'stem sentences.'
- We ask them to repeat phrases 'I say, you say'
- We constantly assess the children in every lesson and fill any gaps.

A typical Maths lesson

- Early Years
- Sing songs, play games etc
- Lots of hands on tasks
- Maths is everywhere!

Reception, Year 1 and Year 2 Mastering Number

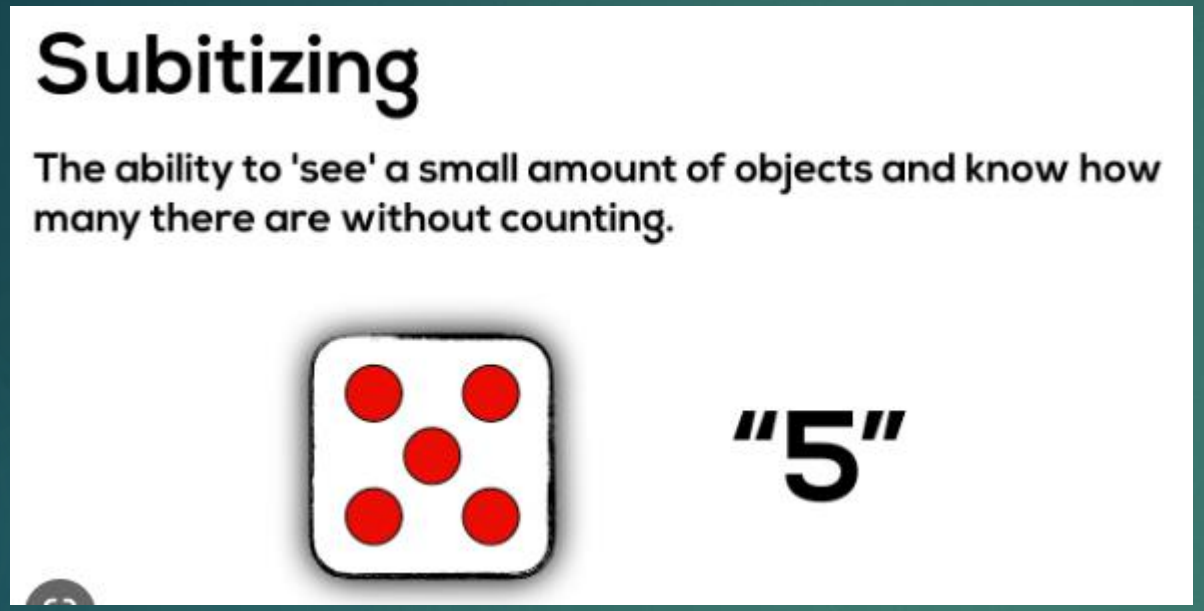
Children have short 10 minute activities as part of 'Mastering Number' tagged onto their Maths lessons to develop their fluency skills.



How is my child stretched if they already know how to count all of the numbers up to 10 or 20?

We ‘delve deeper’ into topics rather than going on to the next year group’s learning.

Some new terminology!



What can you see?

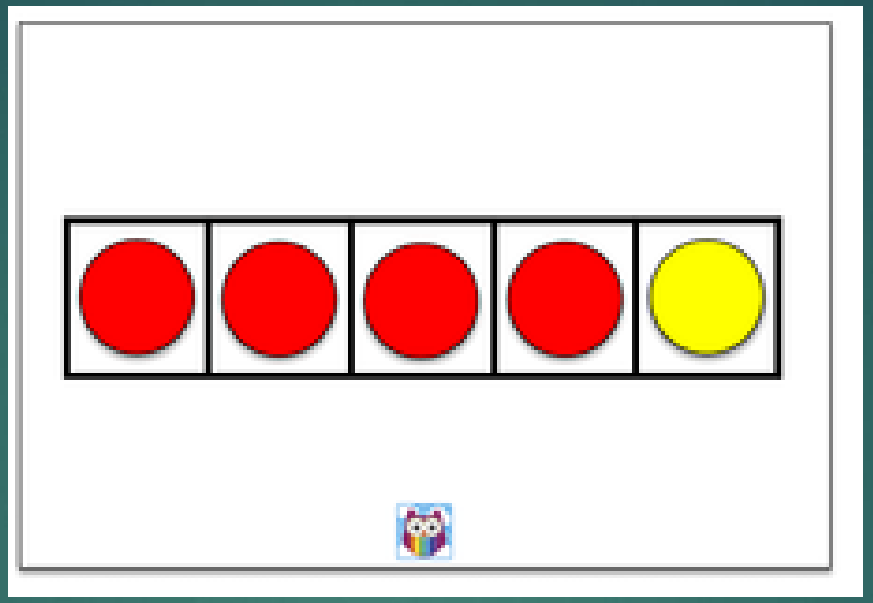
- Subitising

Say what you see! Let's have a go!

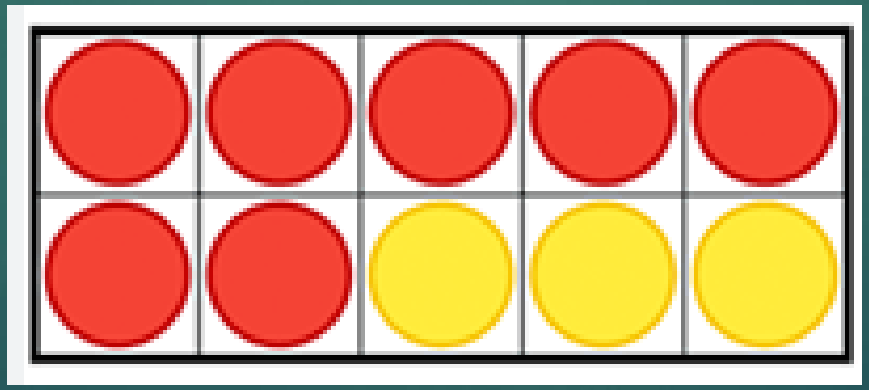
- https://www.youtube.com/watch?v=RHm_7YdGt80

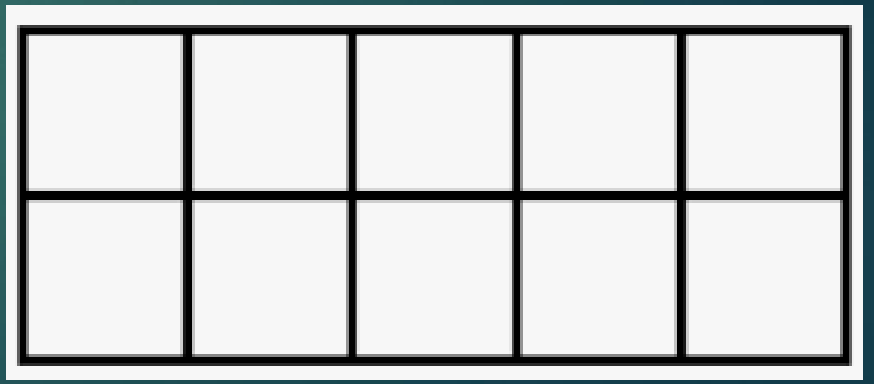
Visuals:

Fives frames



Tens frames

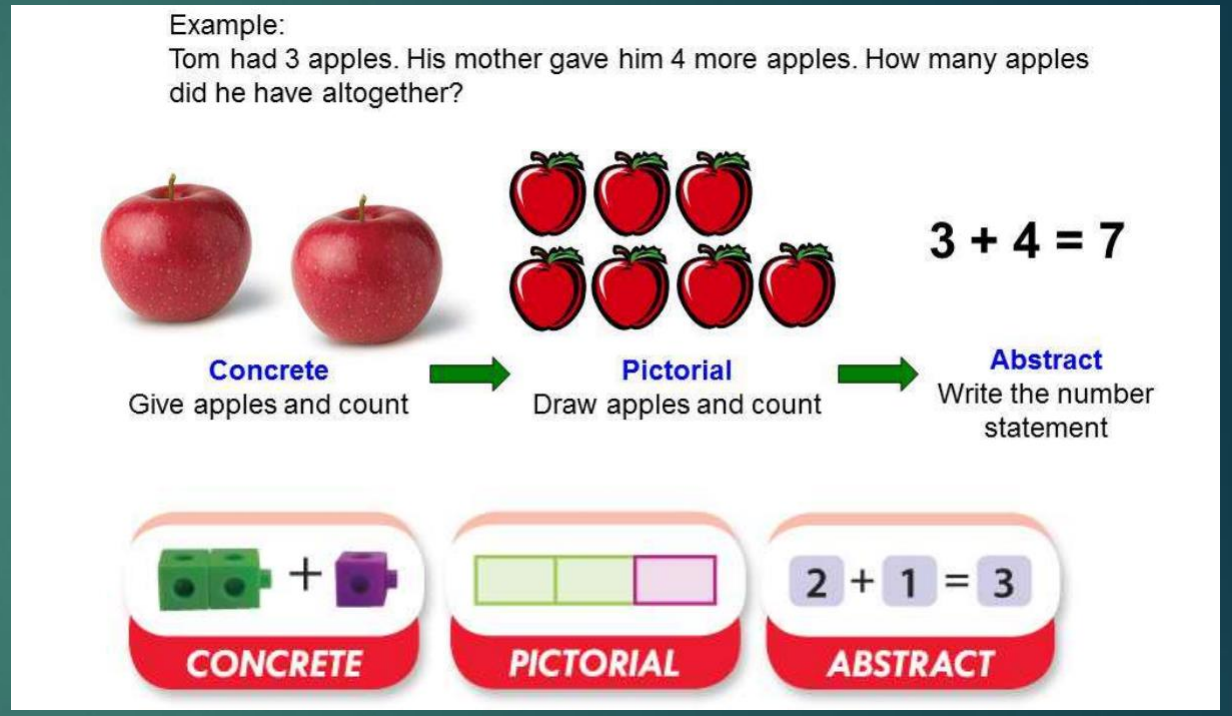




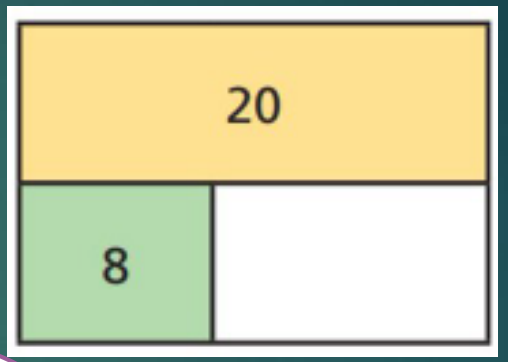
Across the school, we use manipulatives to model, encourage jottings and then move onto the abstract after this.

Concrete
Pictorial
Abstract

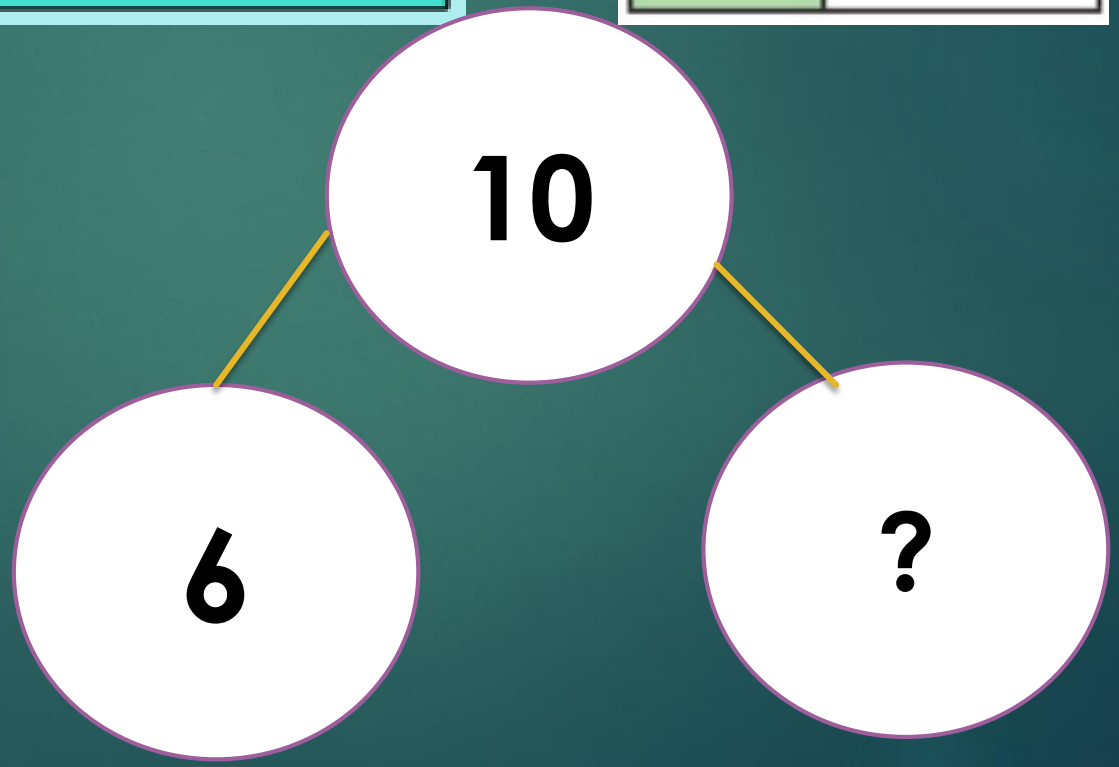
CPA Approach	
Stage	**Characteristics**
Concrete	Refers to the use of manipulatives, measuring tools or objects that the student handles.
Pictorial	Refers to the use of drawings, diagrams, charts or graphs that the student draws
Abstract	Refers to abstract representations such as numbers and letters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



Bar models



Part/ whole models

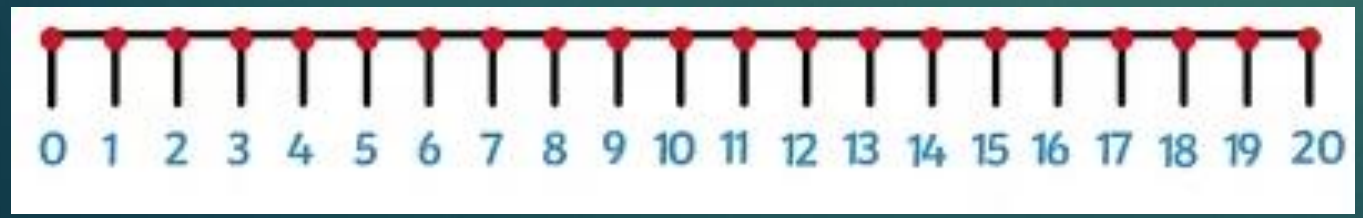


Times table grids

- 100 squares
- Number lines

X	1	2	3	4	5	6	7	8	9	10	11	12
1	1	2	3	4	5	6	7	8	9	10	11	12
2	2	4	6	8	10	12	14	16	18	20	22	24
3	3	6	9	12	15	18	21	24	27	30	33	36
4	4	8	12	16	20	24	28	32	36	40	44	48
5	5	10	15	20	25	30	35	40	45	50	55	60
6	6	12	18	24	30	36	42	48	54	60	66	72
7	7	14	21	28	35	42	49	56	63	70	77	84
8	8	16	24	32	40	48	56	64	72	80	88	96
9	9	18	27	36	45	54	63	72	81	90	99	108
10	10	20	30	40	50	60	70	80	90	100	110	120
11	11	22	33	44	55	66	77	88	99	110	121	132
12	12	24	36	48	60	72	84	96	108	120	132	144

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

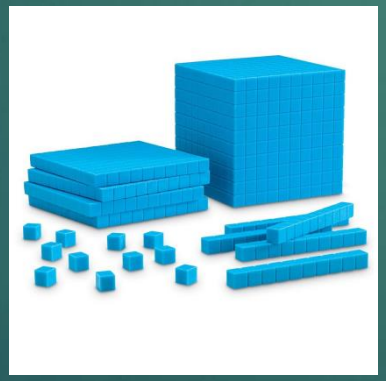


Resources used in class (manipulatives)

- Bead strings
- Counters

Numicon

- Dienes/ Base 10



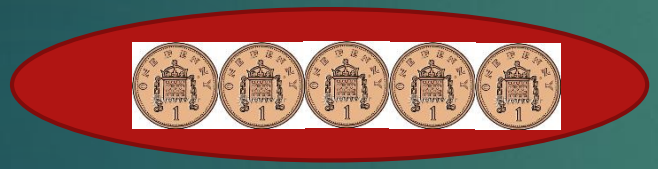
- Multilink

Use the Numicon on your table to find number bonds to 10

Resources that you can use at home to support your children:

- Lego can be used as multilink.

- Group everyday items into sets to understand division, remainders, multiplication etc.



Eg 14 divided by 2= 5r4

Encourage your child to **draw** the problem.

1/3 of 9 =

- Also, encourage them to use their fingers!

Other everyday resources that can help your child's Maths skills at home

- Board games and card games encourage your children to **reason**

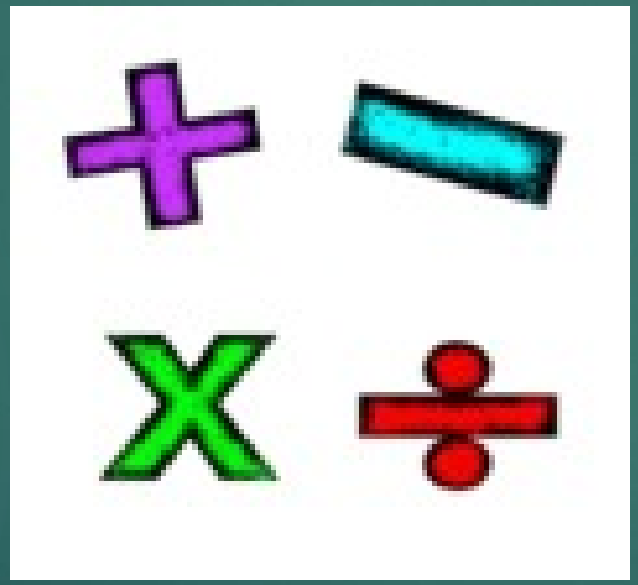
- Find an analogue watch and refer to the time

Using money:

- Allow your children to use real coins.
- Can they work out which coins they will need to buy something?
- Can they use the smallest number of coins?
- Can they calculate their change?

Calculation policy

- The calculation policy for each year group can be found on the Math page on the website.



SATS

- Tests are given to Year 2 in May.
- Children are given arithmetic and reasoning papers.

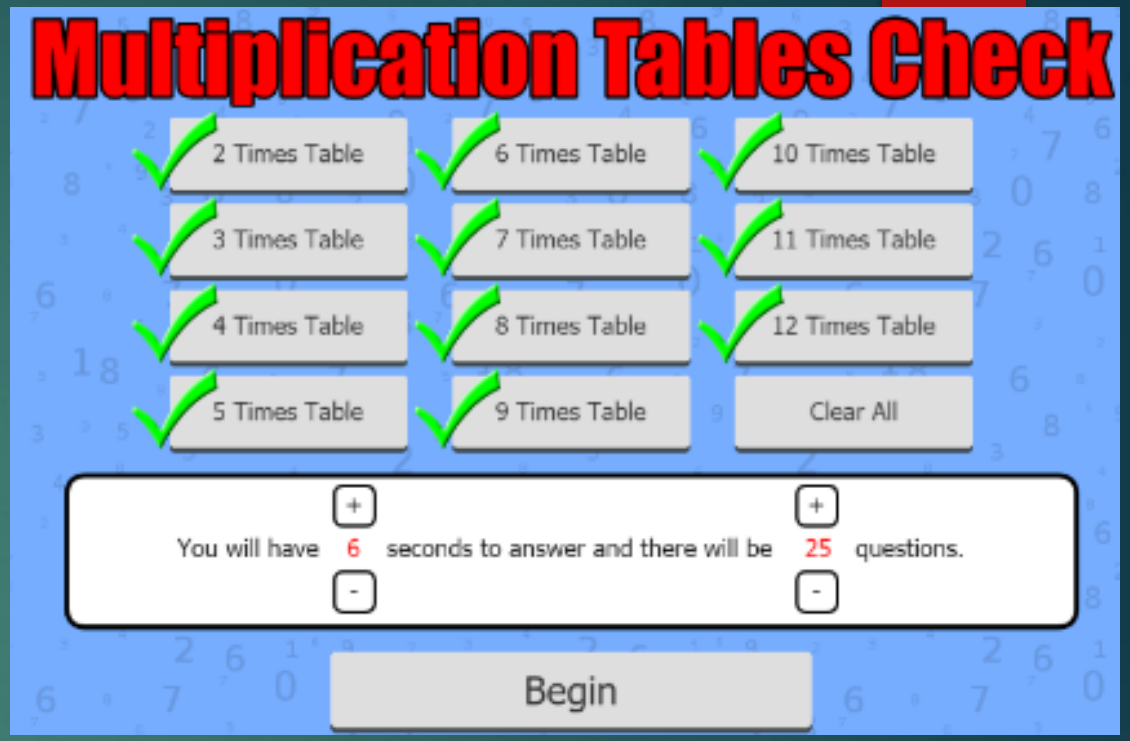
- In the exam – children will not be allowed to use any counting resources. However they need to use them in class first of all to support their understanding.

Understanding multiplication and recalling times table facts are key!

- Times Table Rockstars
- Counting in twos, tens, fives.

Times table apps:

- Times Table Rockstars
- Hit the button
- Topmarks
- Purplemash



Arithmetic questions:

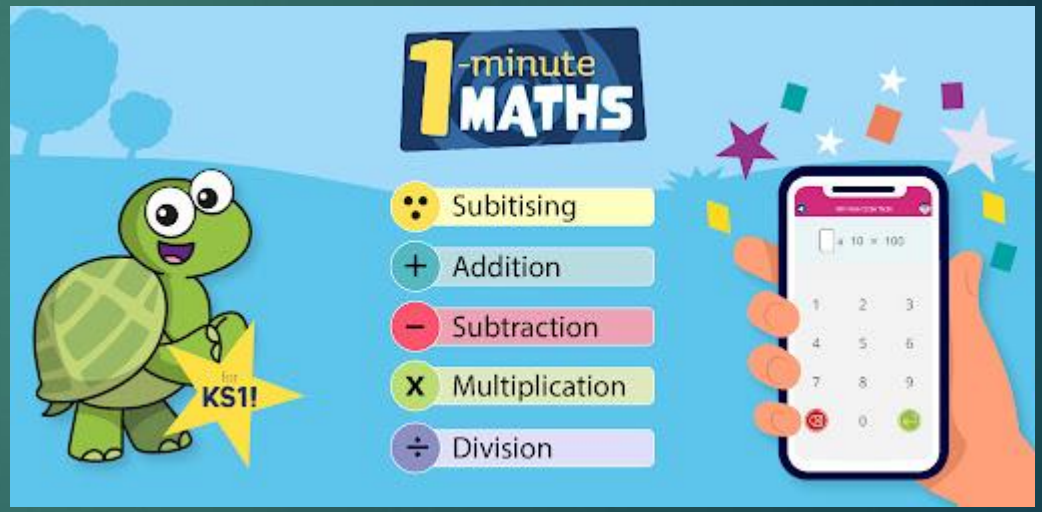
- Children are encouraged to show their working out.
- They can draw diagrams if they wish to help them to solve problems.
- **Example:**

Reasoning questions:

- There is a big emphasis on reasoning/problem solving in the Maths curriculum.
- Children need to be able to explain their thinking. What do they know?
- We encourage children to use the correct mathematical language in their answers.
- **Examples:**

Useful websites you can use at home:

- MyMaths(always use a pencil and paper to make jottings) or use real life objects to help
- White Rose Hub1 Minute Maths app
- Toy Theater (online manipulatives)
- Mathsbot (online manipulatives)
- Topmarks (different topics)
- Nrich (challenging tasks)



Please come and see me if you have any questions!

- Feel free to message me via sessaw or contact the school office if you have any Maths related questions/queries/MyMaths/ Times Table Rockstar issues.
- ‘ PLEASE, PLEASE… NEVER say that you are bad at maths … not anywhere within a 100-mile radius of any child you ever want to influence.’
- Thank you for coming!