

EYFS / KS1 MATHS

WEDNESDAY 2ND FEBRUARY 2022

MISS MCELWAIN AND MS EVANS

RECEPTION

- ▶ 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.
- ▶ 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.

YEAR 1

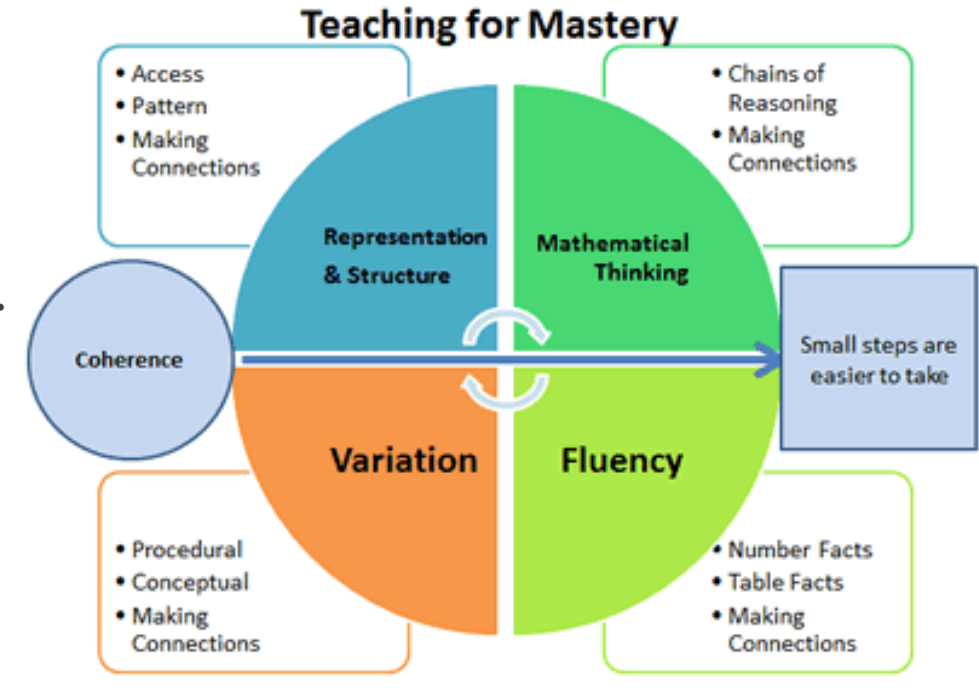
- ▶ Number and place value
 - ▶ Numbers up to 100, including numerals and words
 - ▶ Counts in multiples of 2, 5, 10.
- ▶ Addition and subtraction
- ▶ Multiplication and division
- ▶ Fractions
 - ▶ Halves and quarters
- ▶ Measurement
 - ▶ Time, money, weight, height, length
- ▶ Geometry; shape and position
 - ▶ 2D and 3D shapes
 - ▶ Position, direction and movement

What is a Mastery approach?

- ▶ It focuses on helping children to gain a deep, long-term, secure and adaptable understanding of maths and the concepts taught.
- ▶ Mastery is based on 5 big ideas (NCETM): coherence, representation and structure, mathematical thinking, fluency and variation.
- ▶ In lessons we explore different strategies for working out the questions to allow the children develop a deep and holistic understanding.
- ▶ Children are encouraged to think mathematically during lesson, meaning that they think about, reason and discuss the ideas being taught.

Children who achieve mastery are able to identify what something is, but can also say what is isn't. They can explain why something is wrong and suggest ways to improve it.

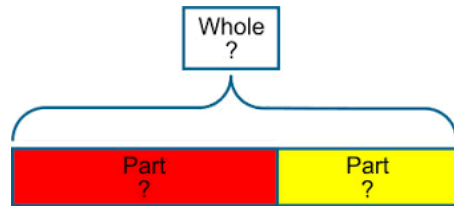
<https://www.ncetm.org.uk/teaching-for-mastery/mastery-explained/five-big-ideas-in-teaching-for-mastery/>



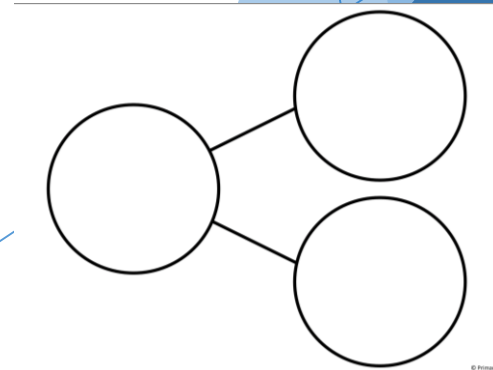
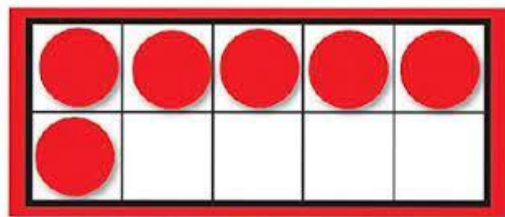
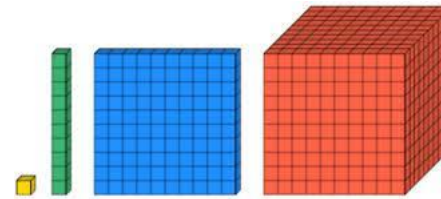
MASTERY
APPROACH

To support children with their mastery approach we use a variety of manipulatives and resources in class.

- ▶ The textbooks we use follow the concrete, pictorial and abstract concept.
- ▶ Children are encouraged to choose which resource will be most useful to them. They are shown how to use different resources appropriately.



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



- ▶ We ensure that we use the correct mathematical vocabulary from the earliest age.
 - ▶ We discuss different rules and laws of mathematics, we encourage the children to use these terms when answering questions during our discussions.
- ▶ We use a range of language to introduce them to the different terms that can be used.
 - ▶ i.e. plus, add, altogether, in total

Examples of language we use:


- ▶ Commutative- when two numbers are added or multiplied, this can be done in any order and the same answer will be obtained.
- ▶ Expression- when there is no = in the calculation (e.g $13 > 12$)
- ▶ Equation- when there is an = in the calculation (e.g $13 + 2 = 15$)
- ▶ Calculation- the question being answered, no matter what the operation is.

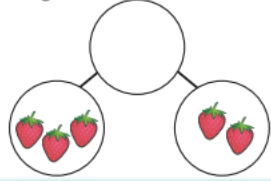
Language we avoid:


- ▶ Sum- unless discussing an addition calculation
- ▶ Number sentence- for children, sentences have capital letters, finger spaces and full stops.

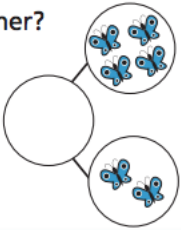
We following the Pearson Power Maths scheme.

- ▶ Everyday there is a textbook page to be discussed with the children and then an adult-led activity.
 - ▶ This is linked to the work discussed as a class and lets the children use resources to help consolidate the concept.
 - ▶ They complete written work in their practice book twice a week, using resources to support their learning. On the second day they look at the concept in an alternative way.
 - ▶ For example; part-whole presented differently or telling their own story for the question.
 - ▶ Children are encouraged to practise their number formation as much as possible.

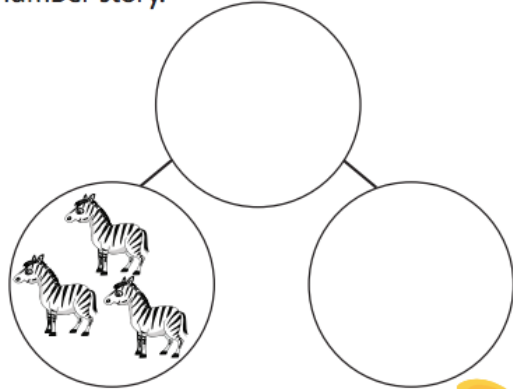
How many  altogether?



How many  altogether?



Complete the part-whole model to tell a number story.



We following the Pearson Power Maths scheme.

- ▶ Everyday there are questions in the textbook, followed by three pages worth of questions in the practice books.
- ▶ The adult works through the questions in the textbook following an ‘I do, we do, you do’ model talking the children through what is happening as it happens and having a conversation about the technique used.
- ▶ The work in the practice book links to the questions in the textbook.
 - ▶ The questions get more challenging as they work through the pages.
 - ▶ The practice book encourages the children to explore the concept by answering questions presented in different ways- improving fluency. The challenge and reflect questions focus more on the reasoning/mathematical thinking side of the mastery approach.

In May, Year 2 children will take Maths SATs tests in Arithmetic and Reasoning.

<https://www.youtube.com/watch?v=cuXJidYP7-0>

- ▶ Gaining confidence by practising number and place value activities and becoming fluent in using different strategies will enable children to approach the SATs tests confidently and independently. Although children can have a reader to help them with the questions, they cannot have any adult help during the tests.

- ▶ Children need to be fluent in recognising numbers to ten, only when this is secure, numbers to 20, then 50 and then 100.
- ▶ It is good practise for them to count on and back using a number-line and then a hundred square from a given number.
- ▶ When they are fluent in recognising and counting on and back to ten and twenty, they can begin to count on and back in tens from a given number - starting to recognise the patterns that they can find in number (using a 100 square they will be able to move up and down the rows- noticing that the tens increase or decrease and the ones remain the same).
- ▶ This can then help them with an introduction to counting on in 2s using the number line to see the pattern as an introduction to the 2 times table, which they will be expected to become secure in during Year 2. They will also learn how to count in 5s, going on to understand multiplication using the x symbol and also as repeated addition.
- ▶ Once children are secure in recognising, forming and understanding the amounts that numbers to ten represent. It is very important that when starting to work with 2 digit numbers - they understand what each of the digits represents - starting with 11, 12 and the teen numbers.
- ▶ It is a good idea to use a tens frame to show the way these numbers are made up- filling up a ten frame with counters to show the one lot of 10 and using counters to show the extra ones - 1 lot of ten and 3 ones to make the number 13 to visually represent how the number is made.
- ▶ Understand the concept of how these numbers are made, is the most important building block in place value understanding which they will continue to use and build on throughout their time in primary school.

- ▶ Counting - Use a 100 square, circle any number with a whiteboard pen, then practise counting backwards and forwards from that number. Depending on how confident your child is, you may want to begin counting on and back to 20, then to 50 and then to 100.
- ▶ One more, one less - The 100 square also helps children to easily identify one more or one less than another number or 10/20 more or 10/20 less, by jumping up or down a row. Cover up random numbers on the 100 square and see if your child can work out which number it is.
- ▶ Counting in Jumps - Use the 100 square to work on jumping forwards and backwards in steps of 2, 5 or 10 by choosing any starting number and circling every number in the sequence.
- ▶ Odd and even numbers - Children can use counters to help them understand the concept of odd and even. They can see if they can share out a given number of counters into two equal groups or not. They can begin to understand that these numbers appear in the 2 times table by using the 100 square to spot the patterns.
- ▶ Number bonds to 10, 20 and 100- It is very important that children become secure with the pairs of numbers that add together to give a total of ten (number bonds). This is another crucial building block of mathematical knowledge which will continue to serve them throughout their time at primary school and beyond.
 - ▶ When they have a secure understanding of how numbers combine to make ten, they can use this knowledge to see the similar pattern of how numbers combine to make 20, 100 and so on, recognising the pattern of number bonds with more challenging numbers as they move up through the school.

- ▶ Addition and Subtraction Problem Solving - Children should understand how numbers can be added together to make a total and gain an understanding of the symbols + and = which represent this in an equation. They will then move onto subtraction and become familiar with the - symbol.
 - ▶ Children can practise counting on from a given number, using a number line or hundred square or counting back to understand the concept of subtraction as counting back.
 - ▶ When they can understand this, this can be incorporated into word problems showing how this can be put into practical application.
 - ▶ In Year 2 this can be further extended into 2 step problems and with secure understanding of place value - children will learn the methods for column addition and subtraction to be able to tackle some problems with 2 digit numbers more easily.
- ▶ Multiplication and division - Regular practise of the 2, 5 and 10 times table will help children to become fluent. They gain an understanding of the x symbol as meaning 'groups of' or 'lots of'. Becoming fluent in these timetables will also help when they are introduced to the \div symbol as they will understand how a total number can be split into equal groups.
- ▶ It is important that children have the secure understanding of place value to be able to decide which is the most appropriate strategy to use - using a number-line, column method or simply drawing a visual representation and crossing out etc. With a strong understanding of number and place value, children will be more likely to approach this confidently.

Any practise of this at home will help children to become secure and confident in their Maths.

Using concrete resources and visual representations will really embed the children's understanding of number and place value as they can see how numbers are made and how addition/ subtraction works.

Key Communication Reminders

We use twitter to update our website remotely. You do not need to follow twitter to keep up to date. This reminder list is on the online school noticeboard (or on school twitter feed) every Friday in the weekly summary.

- **Summary of ways we communicate** - [communication methods](#).
- **School daily noticeboard** – [front page](#) of the website or follow school twitter account
- **Class updates** – [class pages](#) on the website or class twitter feed (Monday homework is added)
- **Dates for the future** – [calendar page](#) of the website (most events when clicked open and give more information)
- **Any queries?** Please add a note to the pupil diary.
- **Latest Covid information** is always on the [front page](#) of the website.
- **Parents' evening booking** link is always on the bottom of the [front page](#) of the website.
- **School answer machine** – for absence

Mobile Phones

Recent update for this year, you can now save a quick link to your mobile phone, should you wish.

Bottom of front page of website:



Quick Links

For quick access, download to your mobile

Here you can save a quick link page to your mobile home screen if you wish.

Daily Online Noticeboard

Calendar

Letters

Ash Class R/Y1

Cedar Class Y1/2

Elm Class Y2/3

Maple Class Y4

Oak Class Y5

Willow Class Y6

Website Homepage

You may find it useful to add this page to your home screen on your phone.

Instructions: IOS Android

If you need help with any communication, please just add a note your pupil dairy and the class teacher will respond.