



# KS1 Maths workshop

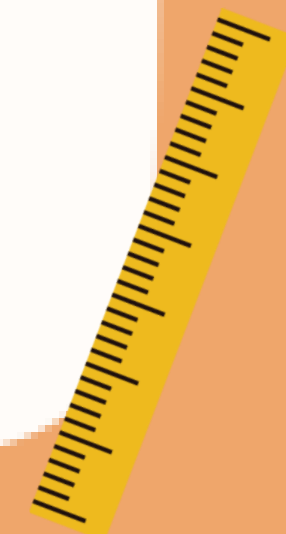
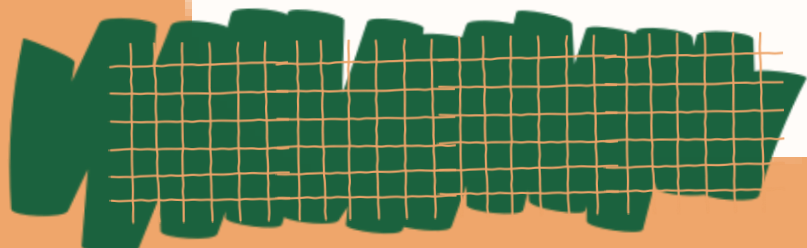
November 2024



# Aims of the session



- What does Maths look like at Arbury Primary School?
- To understand what Mastery Maths is.
- To explain concrete, pictorial and abstract approaches in maths.
- Ways to support at home.



# Maths at Arbury Primary School

✨ At Arbury, we follow the White Rose scheme which recognises that by nurturing positive attitudes and building confidence in mathematics, all children can achieve.

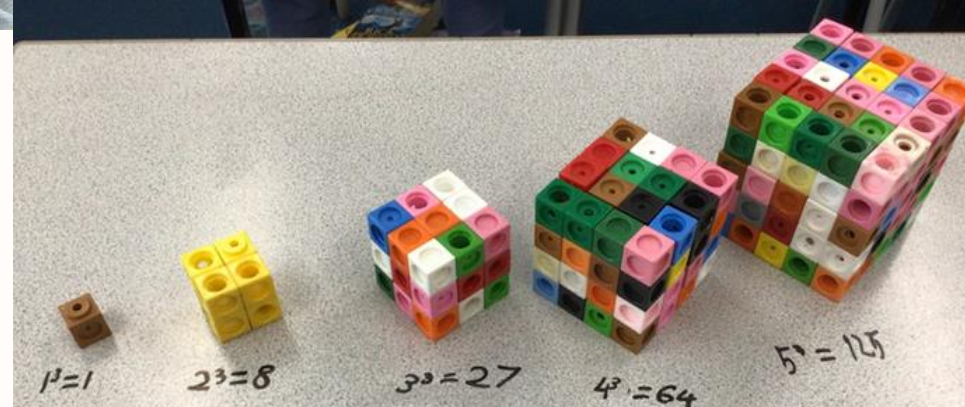
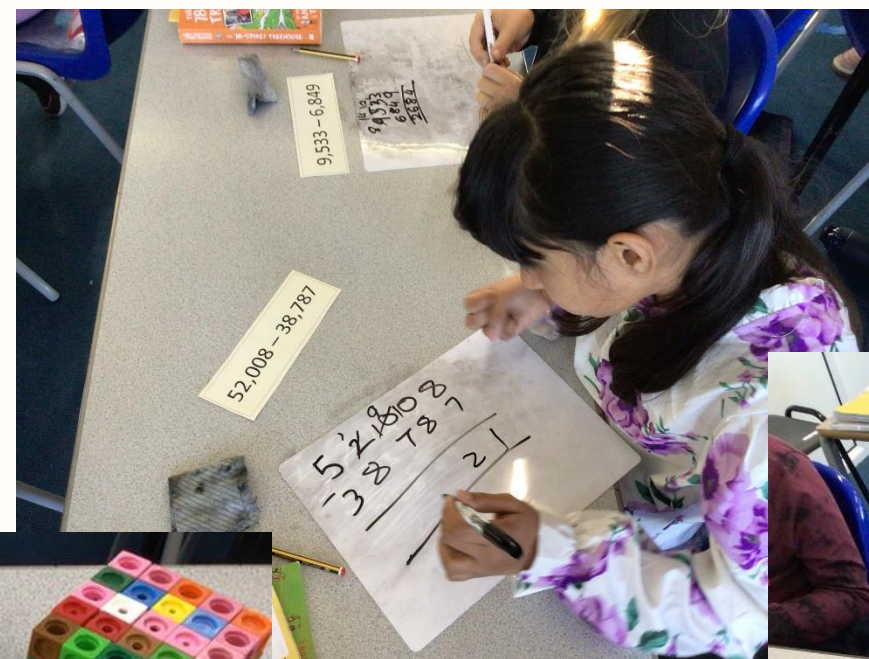
Concepts are built in small, logical steps and are explored through clear mathematical structures and representations.



# Maths at Arbury Primary School

★ Children are taught together as a whole class and the focus is on depth - not acceleration - so that all children have a chance to embed learning.

Children complete regular arithmetic tests, use TT Rockstars and regularly revisit previous learning.





# What is Maths Mastery?

Based on evidence and research

Success for **all** pupils

Focus is on depth, not acceleration

Problem solving is at the heart

Focus on talk and reasoning about mathematics

Aligned with the national curriculum

# Maths Mastery



Tubes of tennis balls come in packs of 2 and 5

Fay has 22 tennis balls.

How many of each pack could she have?

Compare answers with a partner.

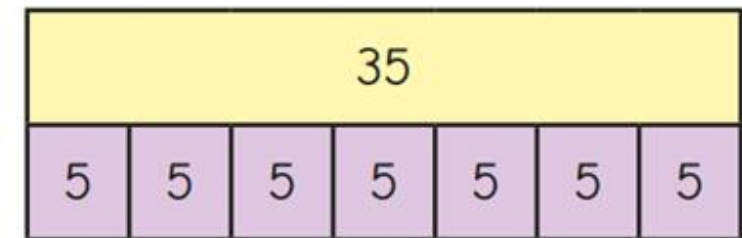


**Problem Solving**

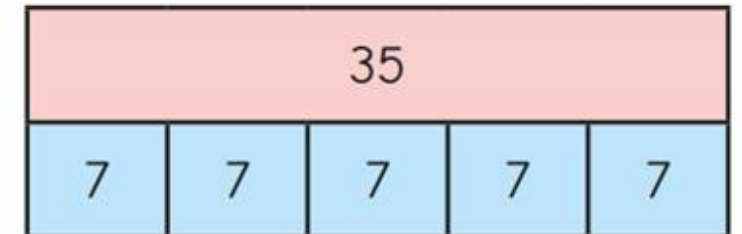
Ben and Sam both draw bar models to show  $7 \times 5$



**Ben**



**Sam**



What is the same and what is different about their bar models?

**Reasoning**

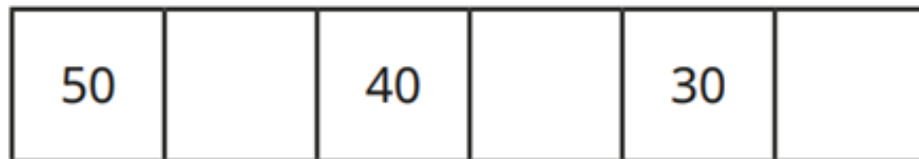
Applying learnt skills and concepts in a variety of different ways - word problems, multi-operational problems, graphically presented problems.



**Fluency**

Developing an understanding of mathematical concepts using concrete, pictorial and abstract representations. Understanding, knowing and recalling number facts, using and applying calculation strategies and skills in a variety of contexts.

Complete the number tracks.

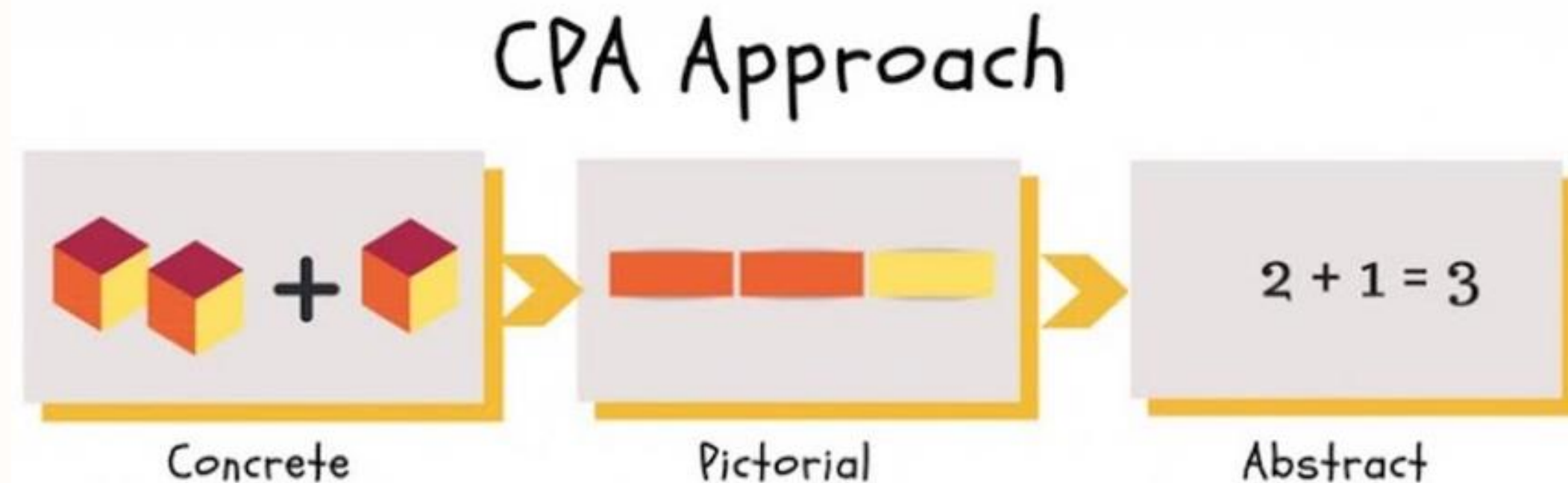


# Concrete, pictorial and abstract resources

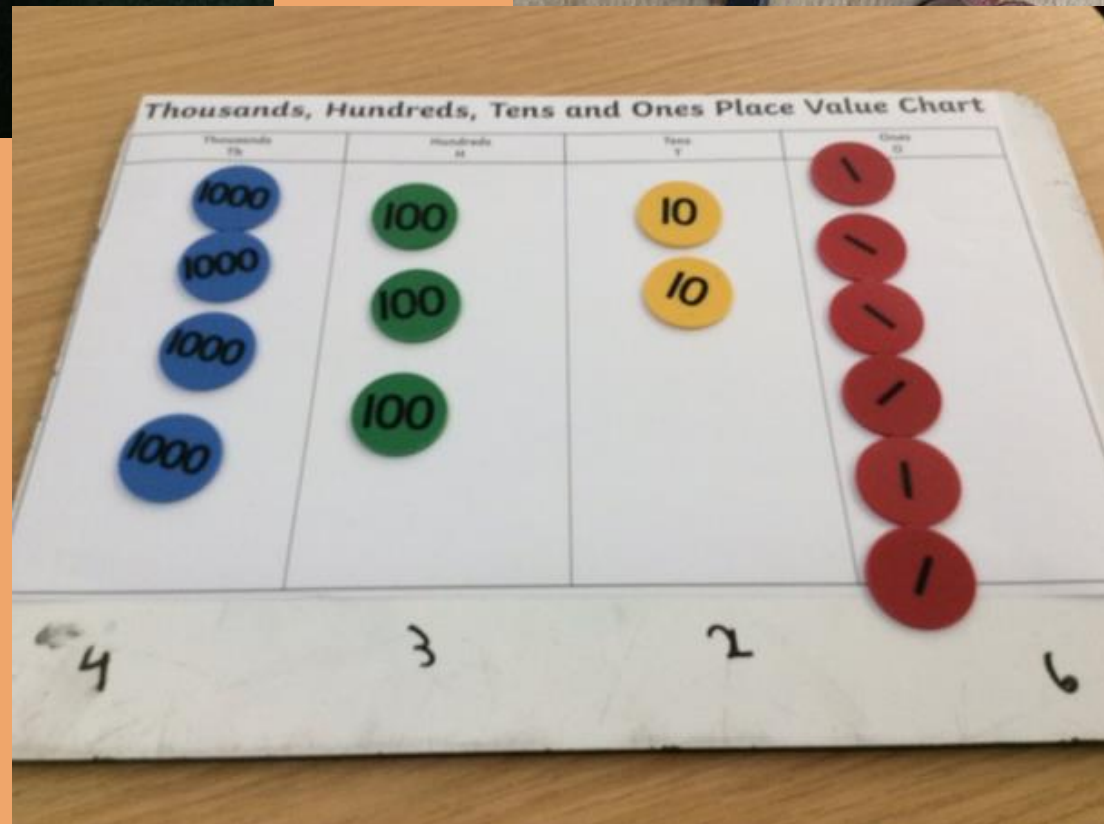


We teach maths using the concrete, pictorial, abstract approach (CPA).

Maths should be practical for all ages and the CPA approach, used at any time and with any age, supports understanding.



# Concrete resources



Using physical objects to solve maths problems. Introducing real objects that can be manipulated to bring the problem to life. E.g. money, counters, fractions wall etc.





# Pictorial resources



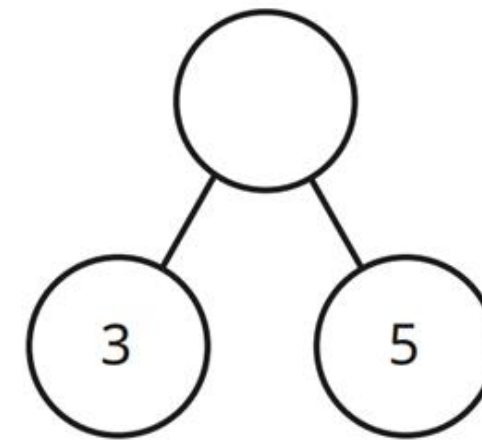
**Using drawings to solve maths problems.**

Once children are comfortable with solving problems with concrete materials, they are given problems with pictures – usually pictorial representations of the concrete objects they were using.



**3** Complete the part-whole models and sentences.

a)



is a part.

is a part.

is the whole.

**5** Complete the additions.

a)



+



=

# Abstract resources



**3** Complete the subtractions.

**a)**  $8 - 1 =$

**b)**  $6 - 4 =$

$18 - 1 =$

$16 - 4 =$

**4** Complete the sentences.

**a)** 10 more than 13 is

**b)** 10 less than 81 is

**Using numbers to solve maths problems.**

The final stage is for children to understand abstract mathematical concepts, signs and notation. When a child demonstrates with concrete models and pictorial representations that they have grasped a concept, we can be confident that they are ready to explore the abstract.





## Maths with Michael

Has maths changed? 1. Place Value 2. Subtraction 3. Multiplication 4. Division 5. Fractions 6. Algebra

**Has maths changed?**

We understand that many parents feel like maths has changed and that it's sometimes difficult to keep up to date with modern teaching methods. Well don't worry, we're here to help.

With over 80% of primary schools and a growing number of secondary schools using our free schemes of learning, supporting resources and assessments, we can help you bridge the gap between school and home.

NEXT →

(Year 2)



# Ways to support at home

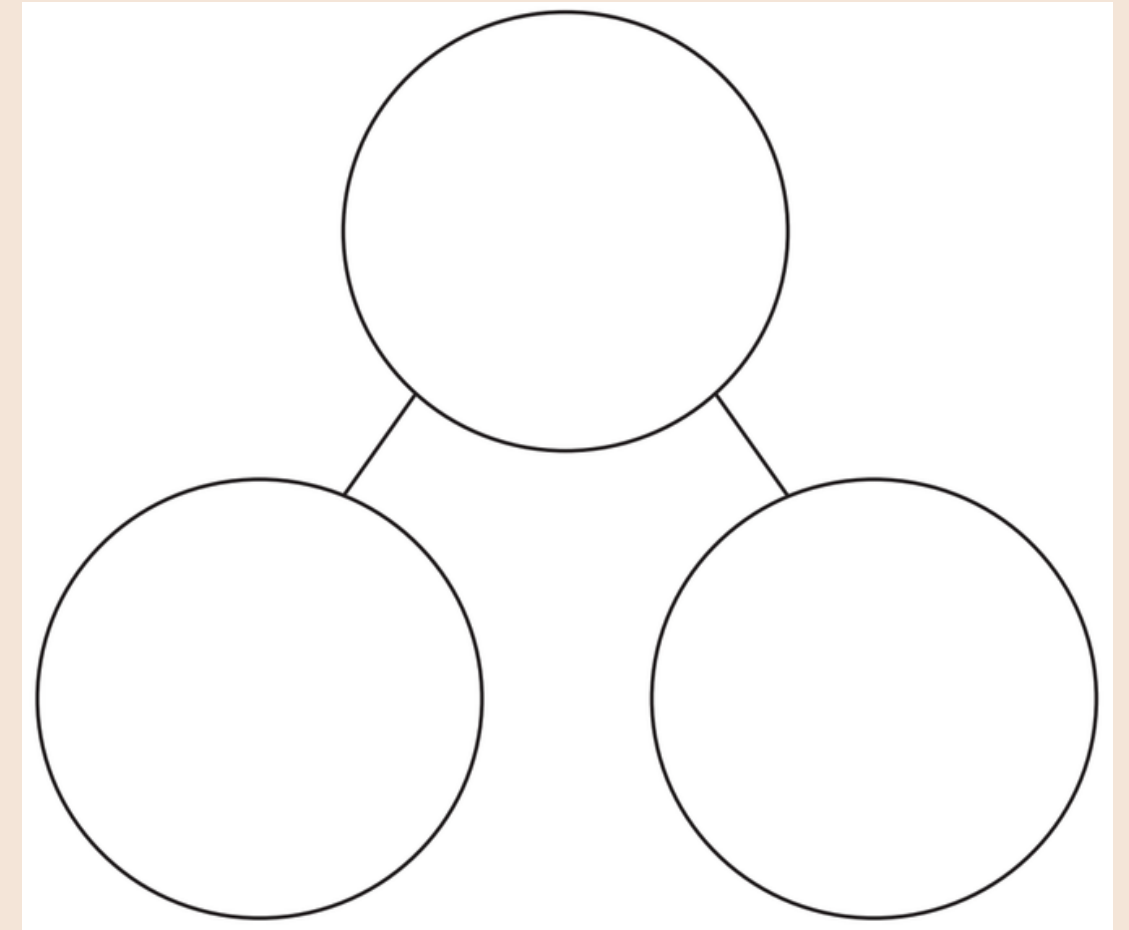


# Ways to support at home

## 100 square

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

## Part-whole model



## Tens frame
