KS1 Maths workshop

Arbury Primary School

November 2024

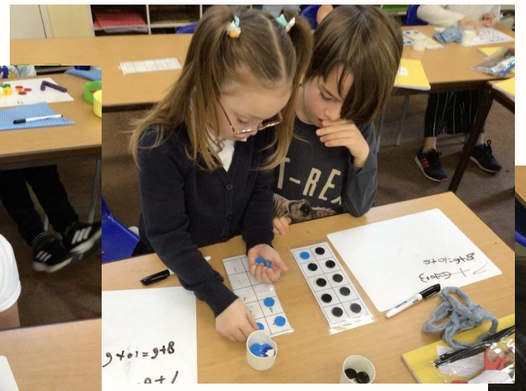
Aims of the session

- 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.

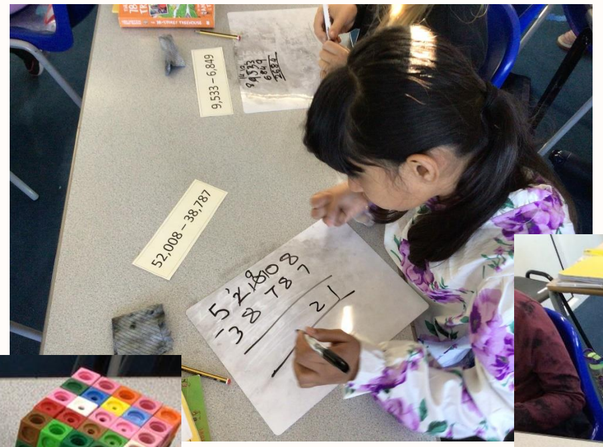
Concepts are built in small, logical steps and are explored through clear mathematical structures and representations.

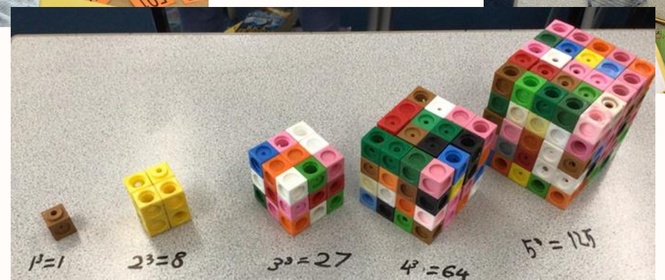


Maths at Arbury Primary School

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

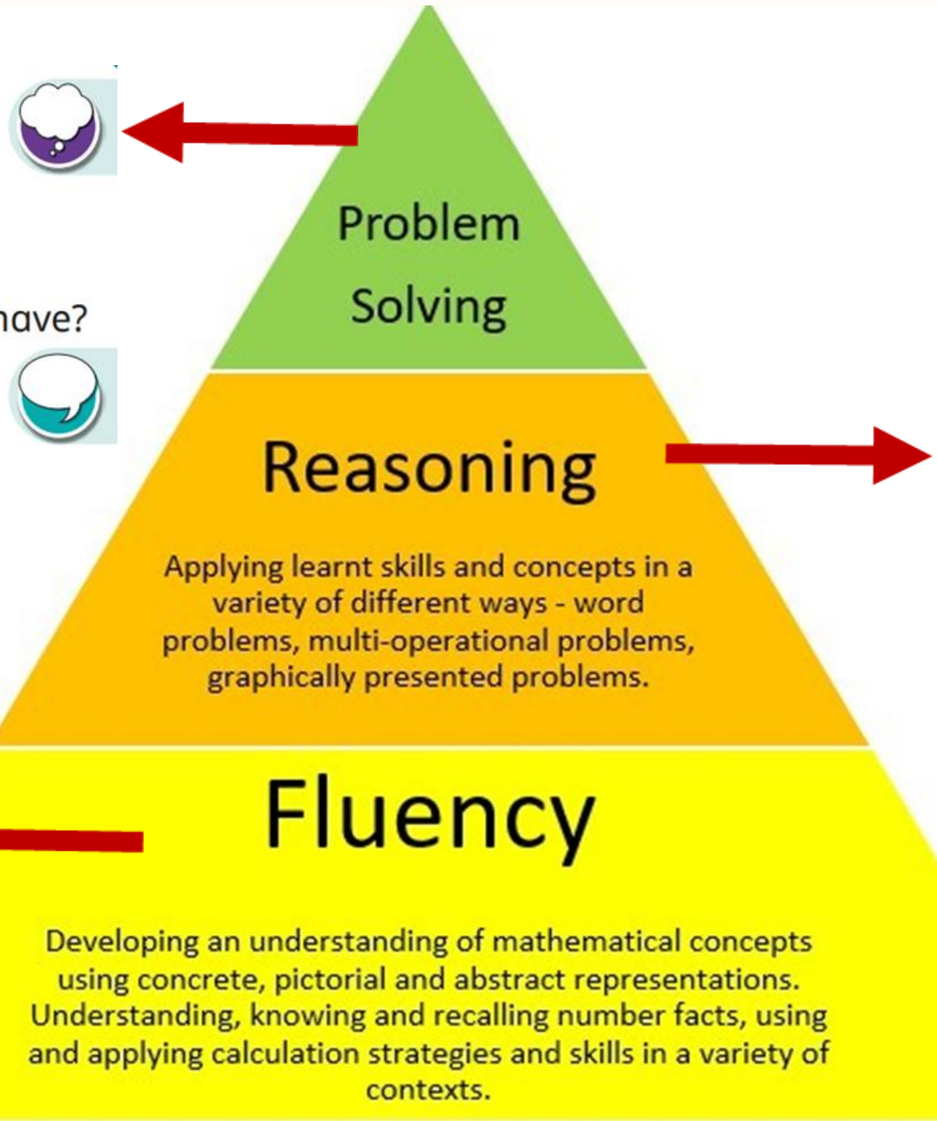
Maths Mastery

Tubes of tennis balls come in packs of 2 and 5

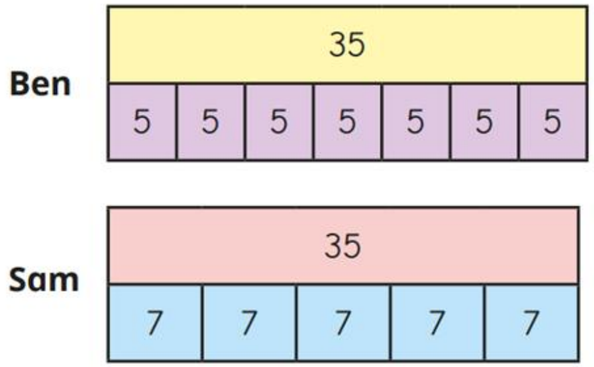
Fay has 22 tennis balls.

How many of each pack could she have?

Compare answers with a partner.



Ben and Sam both draw bar models to show 7 × 5



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

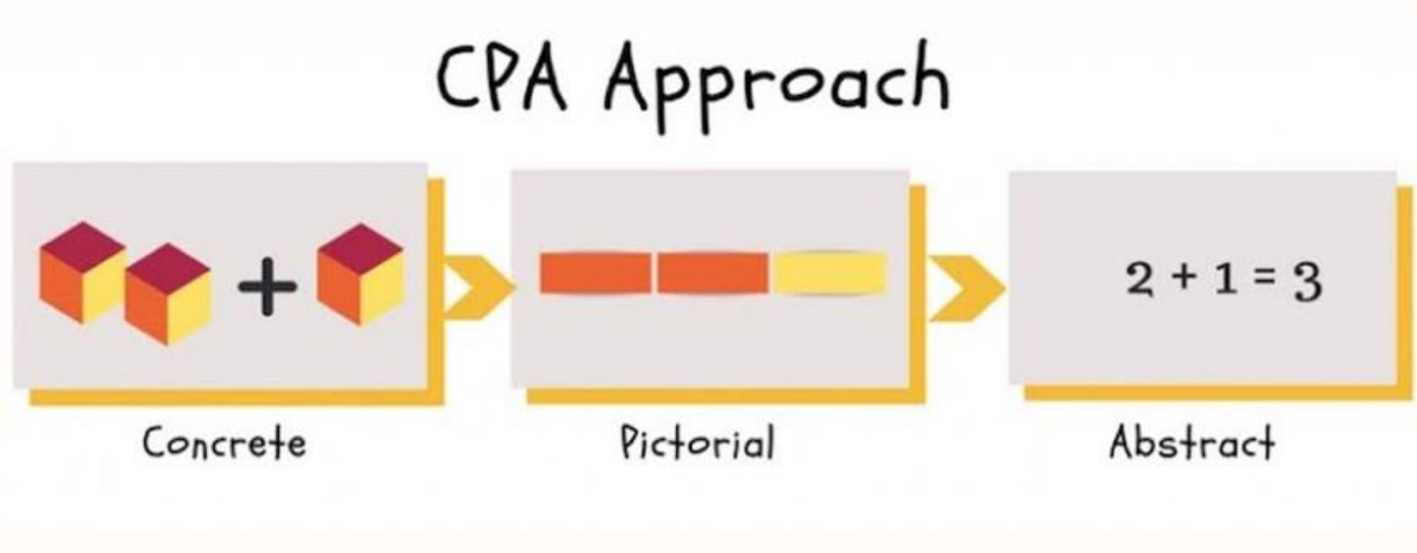
Complete the number tracks.

50		40		30	
35					10

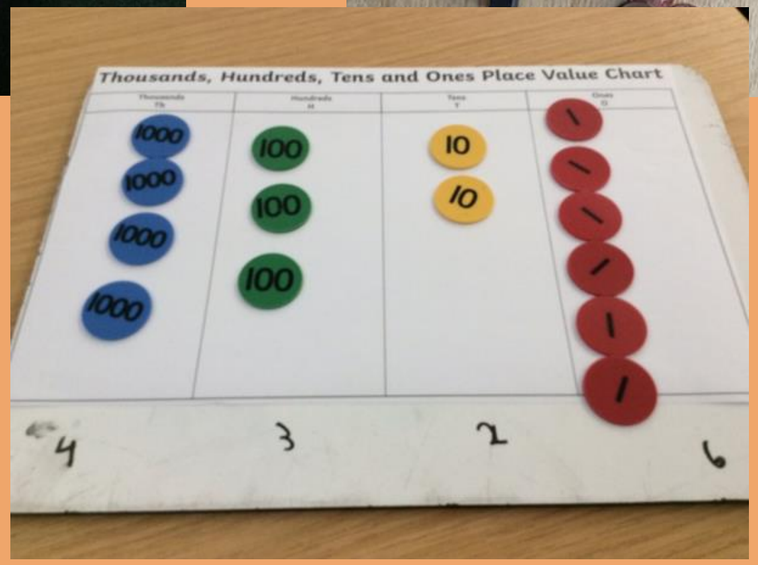
Concrete, pictorial and abstract resources

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

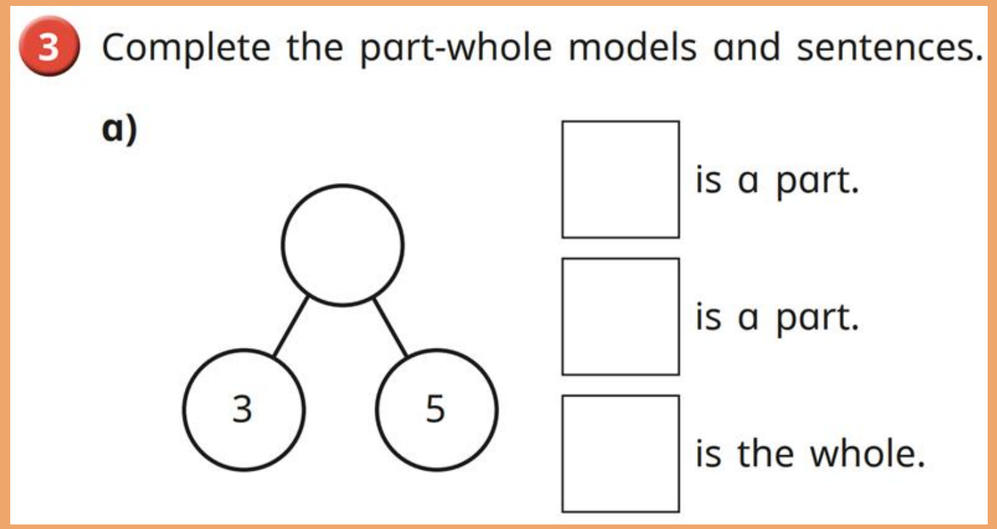


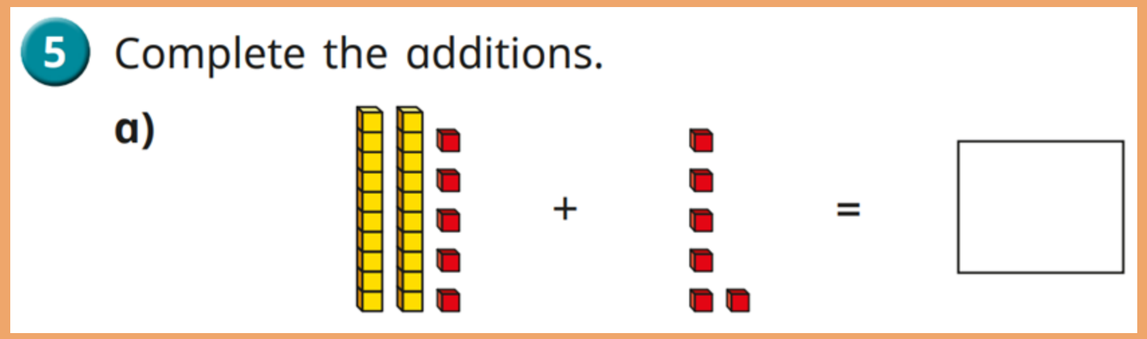
Using physical objects to solve maths problems.
Introducing real objects that can be manipulated to bring the problem to life.
E.g. money, counters, fractions wall etc.

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.





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.

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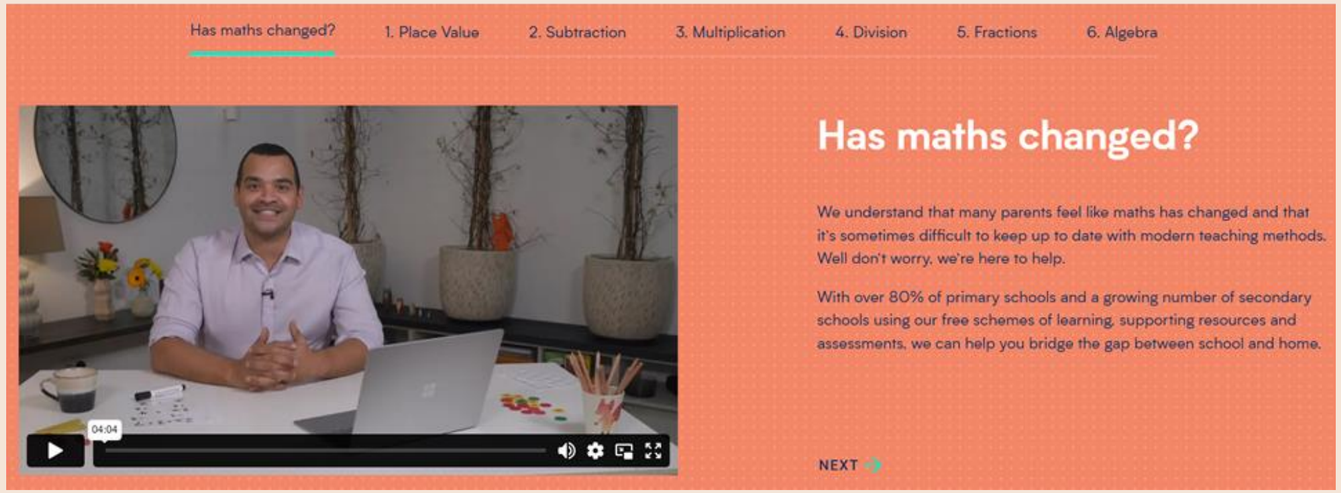
Maths with Michael



(Year 2)

TIMES TABLES ROCK STARS

Ways to support at home

BITESIZE
Primary Levels
Ages 3 to 11

EducationCity

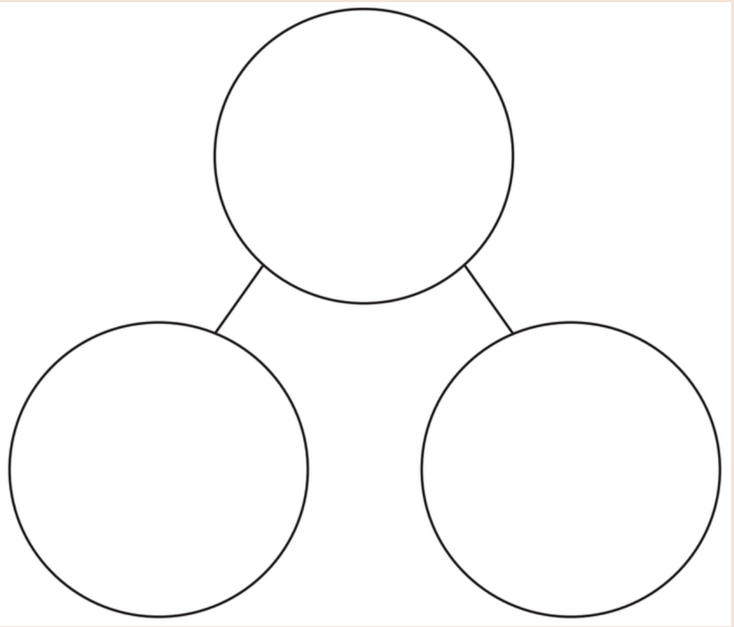
National Numeracy
Getting on with numbers

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
