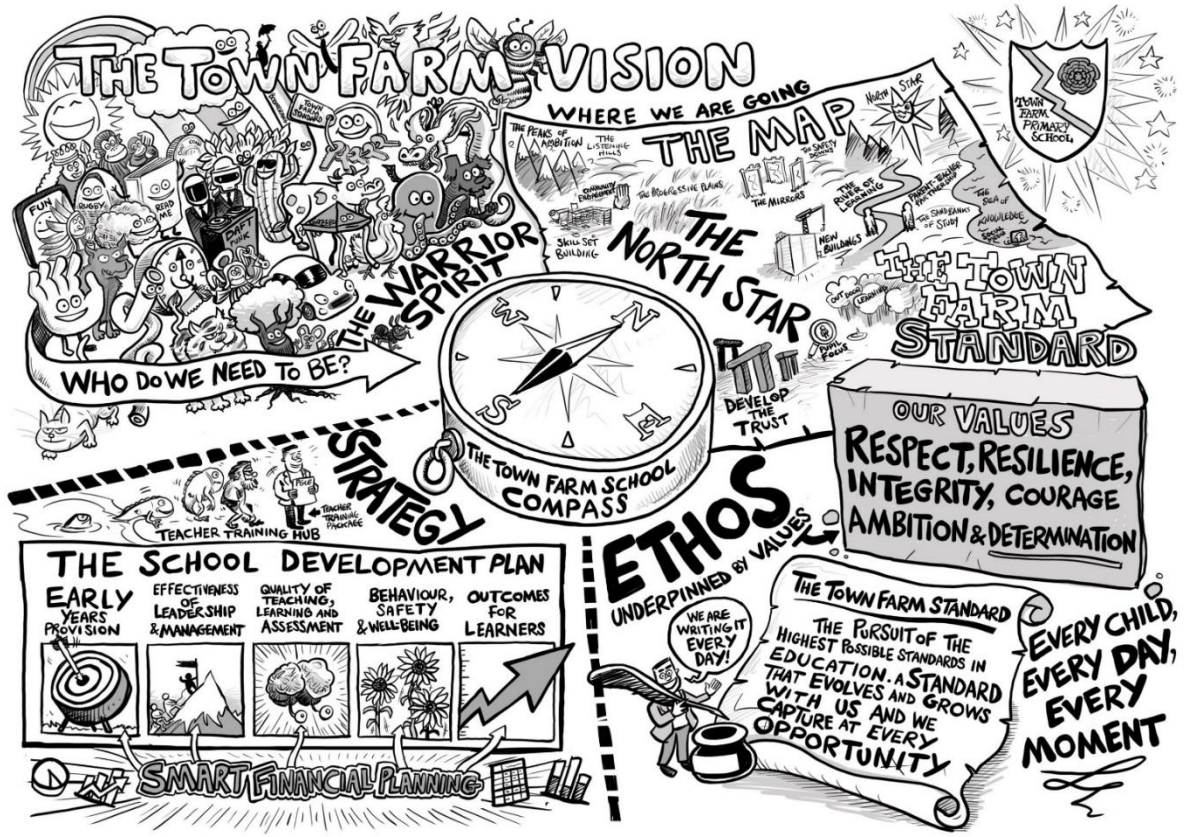
Maths Parent Workshop
19th November 2025



Every Child, Every Day, Every Moment

Our values: Ambition, Courage, Determination, Enquiry, Equality, Integrity, Resilience, Respect

Aims of Today:

- To provide parents with an overview of the CPA approach and how it enables pupils to develop conceptual understanding.
- To raise parents' confidence in supporting pupils with their Maths.
- To enjoy sharing learning with your children.

Family Learning

'Parents are a child's first and most enduring educators, and their influence cannot be overestimated. Parents should be at the centre of any plan to improve children's outcomes, starting with the early years and continuing right through schooling.'

Williams P. Independent Review of Mathematics Teaching in Early Years Settings and Primary Schools: final report DCSF, 2008

Why do we teach maths differently these days?

- Learning has changed considerably since we were at school.
- The expectations of children and their knowledge, skills and understanding is different.
- The methods pupils are required to use are different.
- The way children learn is very different.

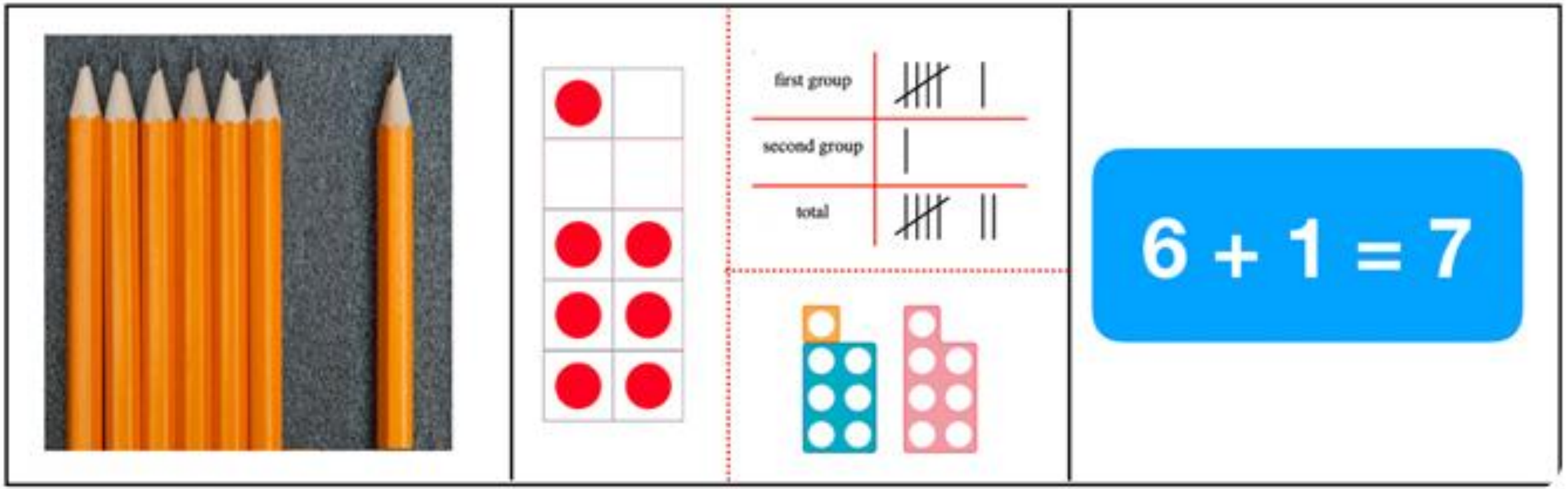
Why do we do it this way when another way is quicker?

- To allow our children to understand problems and see things in a different way.
- To ensure our pupils make sustained progress
- To prepare them with essential life skills

To be successful in Maths, we recognise that our pupils need to develop their conceptual understanding. In other words, pupils don't only need to be able to recall facts quickly, they also need to be able to apply their knowledge in a range of different contexts, including those that are new and unfamiliar.

C.P.A. Approach

Our maths curriculum is ambitious for all our pupils, ensuring that all pupils receive the same quality first teaching of each small step - with the appropriate support to rehearse previously taught knowledge and develop new understanding through the C.P.A. approach. The CPA approach helps pupils understand mathematics and make connections between different representations.

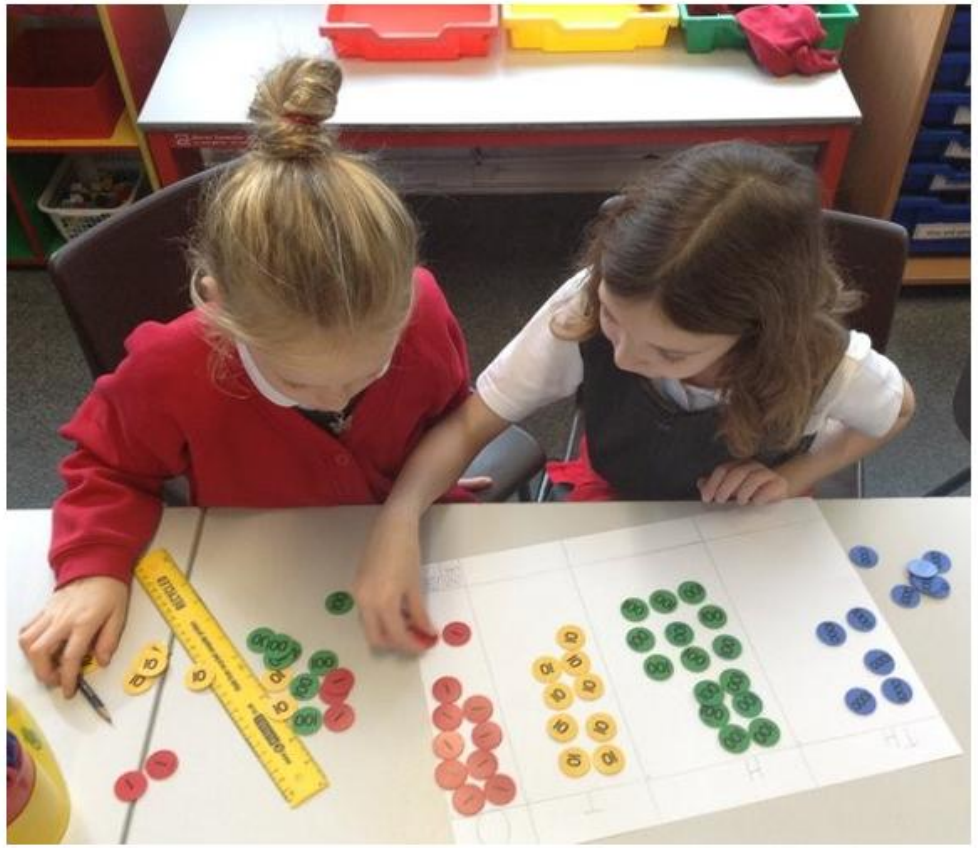


CONCRETE ➢ PICTORIAL ➢ ABSTRACT ➢

C.P.A. approach – concrete

Concrete resources are used to develop understanding of the concept that is being taught.

The 'doing' stage



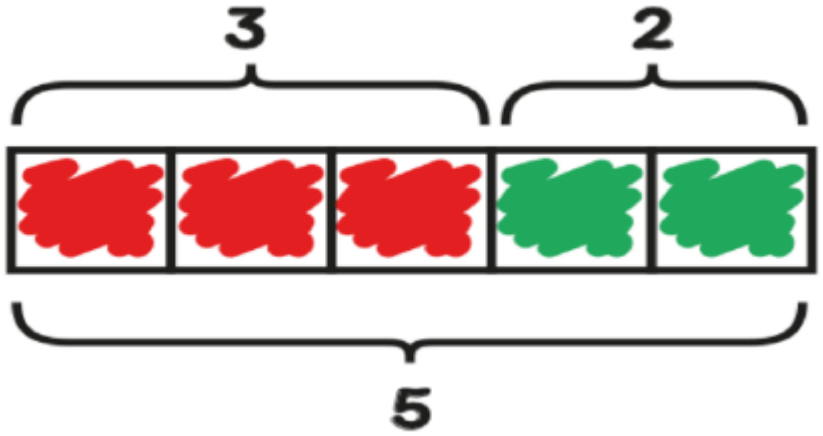
- Pupils use concrete objects to solve problems.
- It brings concepts to life by allowing children to handle physical objects themselves.
- Every new abstract concept is learned first with a 'concrete' or physical experience. For example:

There are 3 flowers in the vase. Hannah has 2 flowers in her hand. How many flowers are there altogether?

In this problem, the children might first handle actual flowers – the concrete stage – before progressing to handling counters or cubes (like Numicon) which are used to represent the flowers.

C.P.A. approach – pictorial

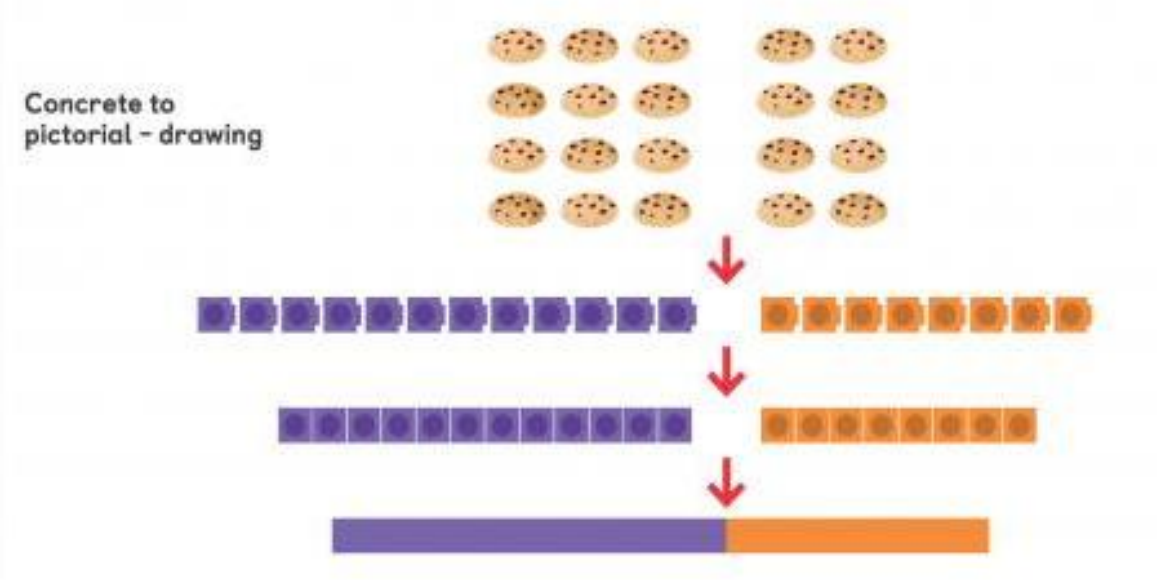
The 'seeing' stage



- Pupils use representations of the objects involved in maths problems.
- This stage encourages children to make a mental connection between the physical object and abstract levels of understanding, by drawing or looking at pictures, circles, diagrams or models which represent the objects in the problem.

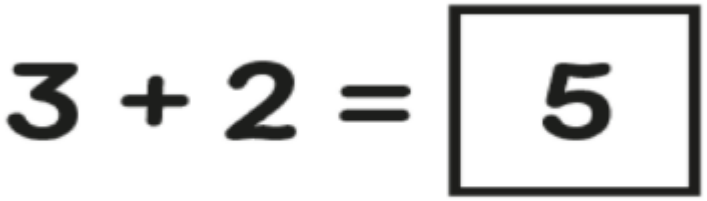
- Building or drawing a model makes it easier for children to grasp concepts they traditionally find more difficult, such as fractions, as it helps them visualise the problem and make it more accessible.

For example, the pictorial stage would involve using drawings of flowers or pictures of objects such as multi-link blocks or counters, to represent the actual object.



C.P.A. approach – abstract

The ‘symbolic’ stage

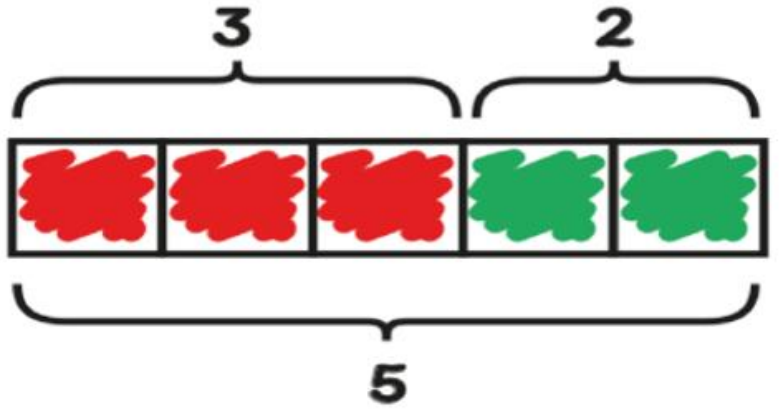


- This is where children are able to use abstract symbols to model and solve maths problems.
- Once a child has demonstrated that they have a solid understanding of the ‘concrete’ and ‘pictorial’ representations of the problem, the teacher can introduce the more ‘abstract’ concept, such as mathematical symbols.
- Children are introduced to the concept at a symbolic level, using only numbers, notation, and mathematical symbols, for example +, –, x, / to indicate addition, multiplication, or division.

So, for the following problem:
Jim has 12 cookies. Julie has 8 cookies. How many do they have altogether?

Children at the abstract stage would be able to solve the problem by writing it out as **12 + 8 = 20**

C.P.A. approach – concrete



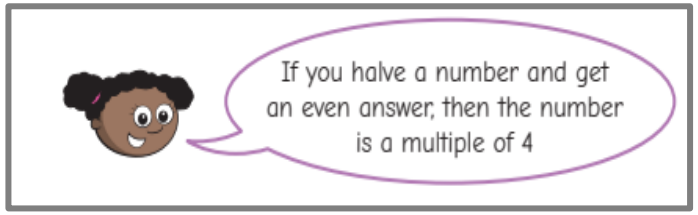
$3 + 2 = \boxed{5}$

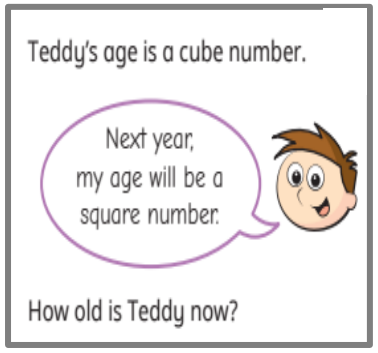
CONCRETE ➤ PICTORIAL ➤ ABSTRACT ➤

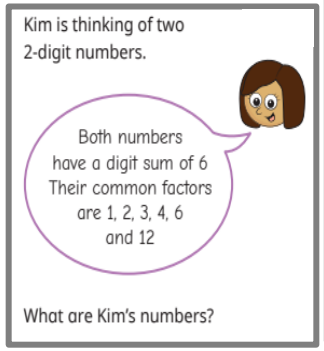
Mastery approach – concrete, pictorial and abstract

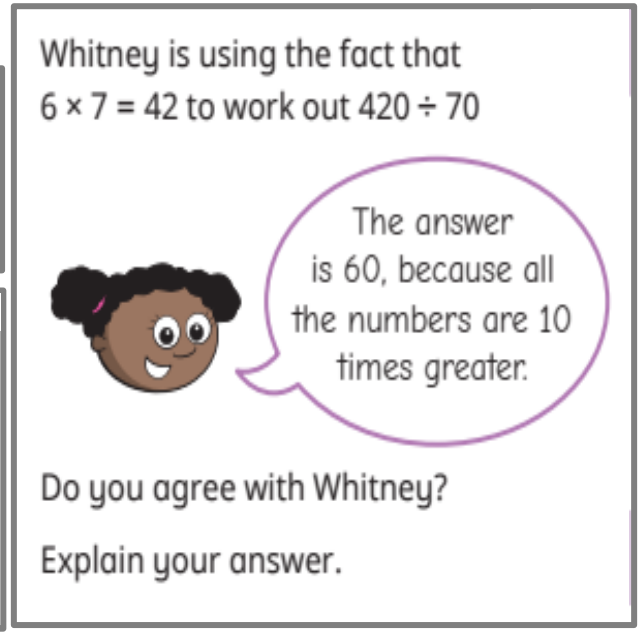
White Rose Maths aims for pupils to become fluent in the fundamentals of maths, to be able to **reason** and **solve problems**.

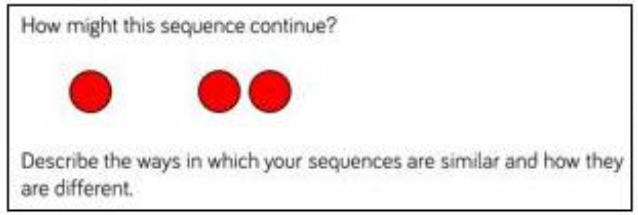
The CPA approach helps pupils understand mathematics and make connections between different representations.







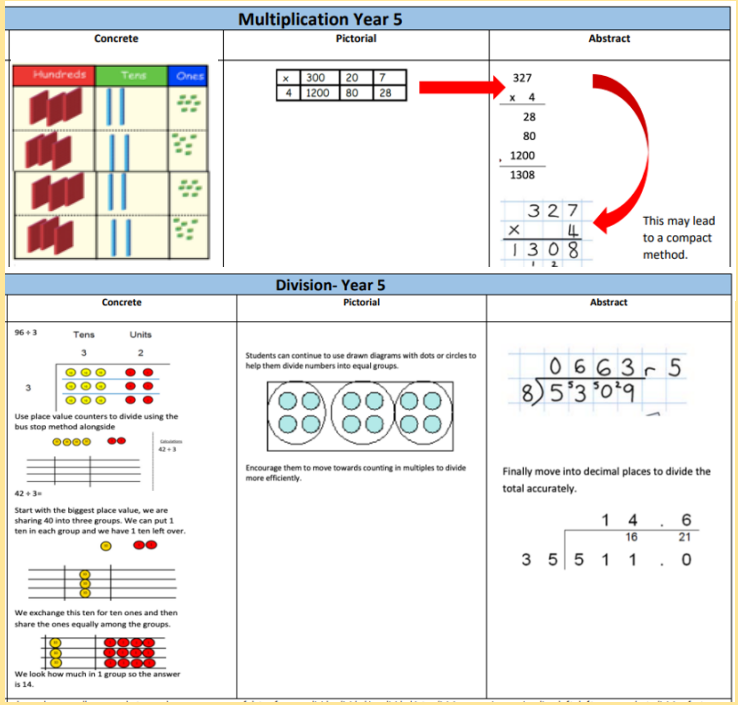


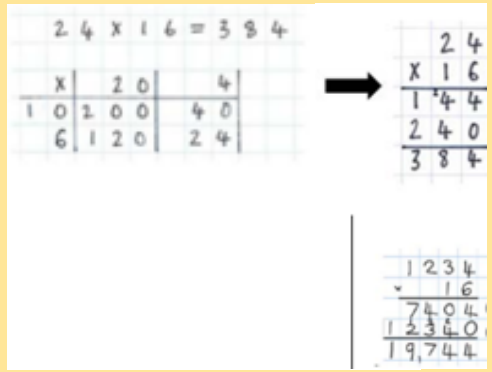


Mastery approach – What Does Maths Look Like at Town Farm

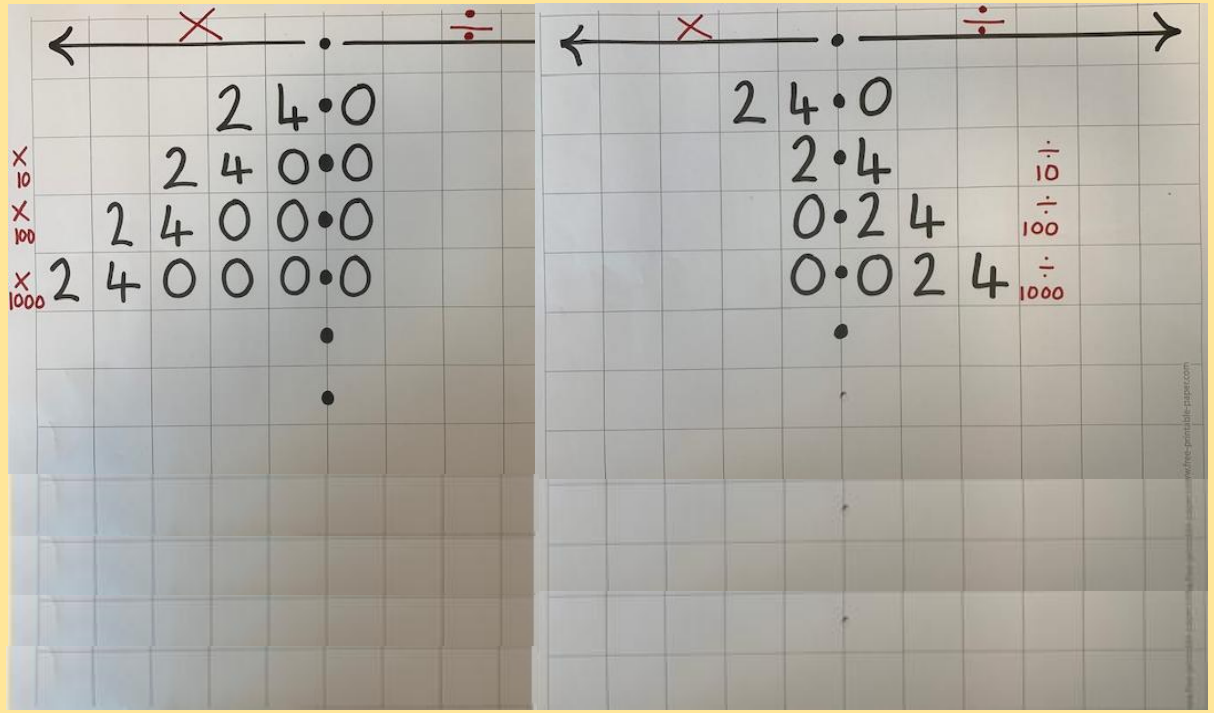
- Fewer Concepts
- Greater Depth
- Class working together
- Longer time on topics
- More Able are not moved on to new content. They are given opportunities to explore concepts at greater depth
- Breadth and depth rather than speedy progress
- Encourage high quality ‘maths talk’ where children are encouraged to use the correct mathematical vocabulary
- Children are encouraged to ask why? How do we know?
- Use mathematical equipment
- Concrete, Pictorial, Abstract- Do it, Draw it, Write it
- Discussing mathematical ideas/thinking/verbalising and reasoning
- Thinking ‘outside the box’

In maths we are learning about...





Our learning journey...



Our key vocabulary

Share equally

remainder

inverse

divided

divide

array

lots of

equal groups

left over

commutative

times

factors

product

inverse

array

multiply

Sets of

multiples

altogether

Extend your thinking

If you halve a number and get an even answer, then the number is a multiple of 4

Teddy's age is a cube number.

Next year, my age will be a square number.

How old is Teddy now?

Kim is thinking of two 2-digit numbers.

Both numbers have a digit sum of 6 Their common factors are 1, 2, 3, 4, 6 and 12

What are Kim's numbers?

Whitney is using the fact that $6 \times 7 = 42$ to work out $420 \div 70$

The answer is 60, because all the numbers are 10 times greater.

Do you agree with Whitney?

Explain your answer.

Progression of Times tables

Year 2	Year 3	Year 4
Counting in multiples of 2s, 3s, 5s, 10s	Fluent 2s, 3s, 4s, 5s, 8s, 10s multiplication facts	Fluent in all times tables, up to 12 x 12, by the end of Year 4.

Y4 have been working incredibly hard to learn their times tables and have spent this week creating fun and motivating ways to support each other, to grasp the trickier ones:

We made times table lanyards and created a daily prize draw for playing Times Table Rockstars at home.




We took part in a times table carousel of activities: Mathopoly, top trumps, bingo, connect 4, Hit the Button...



How you can help at home

•Be positive about Maths – use Michael to help you:

https://whiterosemaths.com/maths-with-michael

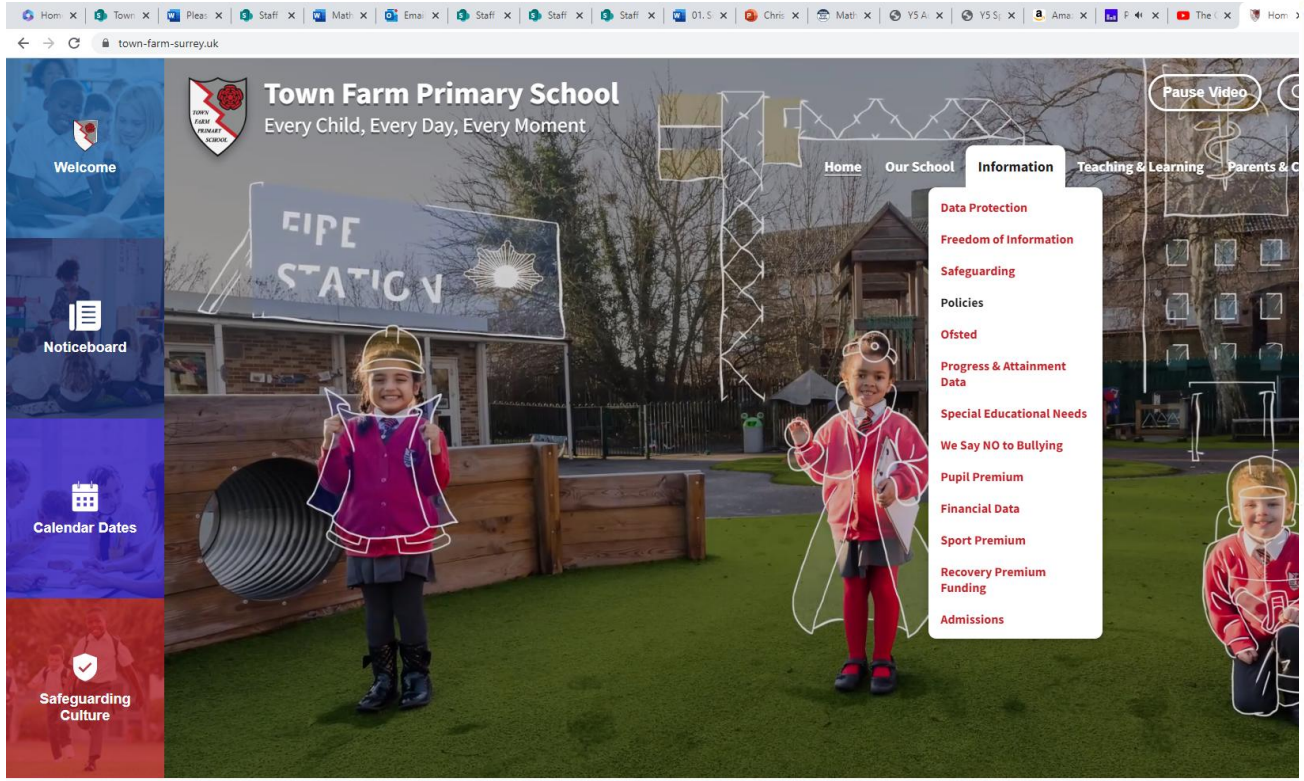
We understand that many parents feel like maths has changed and that it's sometimes difficult to keep up to date with modern teaching methods. Well don't worry, we're here to help. Watch our short videos on: place value, subtraction, multiplication, division, fractions and algebra and download the free supporting parents guides.

• Use Maths in the real world with your child: shopping, spending money, percentage discount, telling the time, measuring, shapes, planning parties, trips or holidays.

How you can help at home

- Use Town Farm's calculation policy to reinforce learning at home and to see examples of the methods being taught in school.

- Encourage your children to login and play Times Table Rock Stars and Maths Whizz



Now it's your turn…

Using the resources on your table, how many different ways can you show:

- A half
- The number 6
- Aiden has 3 pencils and Jack gives him 2 more, how may pencils does he have altogether?

Any Questions?