

# TANKERSLEY C of E (A) PRIMARY SCHOOL

## MATHS POLICY



***“Guide me in your truth and teach me, for you are God my saviour and my hope is in you all day long.”***

We aim high and have self-belief

We have community spirit

We are enterprising

We have enquiring minds

We are respectful

Updated September 2023

Next review September 2025

# TANKERSLEY ST. PETER'S PRIMARY SCHOOL MATHEMATICS POLICY

Our policy outlines the aims, organisation and management for the teaching and learning of mathematics at Tankersley St. Peter's Primary School.

## Our Vision



At Tankersley St Peter's, our vision for mathematics is that every pupil is taught a broad, balanced and engaging curriculum that takes into account the requirements of the National Curriculum. Our mastery approach curriculum ensures that every child can achieve excellence in mathematics and develops a 'can do' and positive attitude in our children.

Using the White Rose Maths Hub documents, our teachers ensure that mathematics is taught progressively and builds on prior learning, using year group concepts and objectives. We have sequenced our curriculum to build children's depth of understanding when teaching each mathematical skill and our children are given many opportunities to consolidate prior knowledge and explain their learning.

## INTENT

We believe that all our children should have:

- A deep understanding of maths and number.
- A positive and resilient attitude towards mathematics.
- Competence and confidence in mathematical knowledge, concepts and skills.
- Fluency in mathematics where our children can express ideas confidently and talk about the subject using mathematical language.

An ability to solve problems, to reason, to think logically and to work systematically and accurately.

- An understanding of the importance of mathematics in everyday life.

Our maths curriculum aims to ensure that all our children:

- Become fluent in the fundamentals of mathematics through placing number at the heart of our curriculum with daily practice to ensure fluency of number facts.
- Reason mathematically through ensuring discussion plays a vital role in all lessons; children are actively encouraged to discuss with peers and teachers, 'how and why' using mathematical language.
- Can solve problems by ensuring problem solving is embedded in lessons and variation of questions are used to enable children to apply their knowledge to different situations.

- Are challenged, which is built into lessons for children who grasp concepts rapidly through sophisticated problems.
- Can attend same day intervention, which is provided for children who are not sufficiently fluent to consolidate their understanding.

## IMPLEMENTATION

Our mastery approach to the curriculum is designed to develop children's knowledge and understanding of mathematical concepts from the Early Years through to the end of Y6. We follow the National Curriculum and use White Rose Small Steps as a guide to support teachers with coverage, progression planning and assessment.

We ensure there are planned opportunities for children to revisit their learning in Countdown Maths and Maths Meetings. This allows for a greater depth of understanding.

We use a wide range of models, visual manipulatives and practical resources to support learning. Activities cover a wide range of mathematical knowledge, many with an emphasis on practical work and applying skills. Each sequence is taught using small steps with many opportunities given for Concrete, Pictorial (including bar model) and Abstract approaches, and variation through question types: Varied Fluency, Reasoning and Problem Solving. We build on skills and understanding in a progressive way, where mathematical connections are also made to other themes.

Maths Meetings take place daily to deepen fluency. Questions are planned carefully to ensure depth of understanding. Same day Maths Interventions take place to help pupils to practice tricky concepts, deepen understanding and post teach mathematical gaps- keep up, not catch up!

Our children are encouraged to be confident in maths and to apply the skills that they learn to problem solving and reasoning using the motto... use what you know to find out what you don't. Children are given many opportunities as possible to explain their learning- verbally, pictorially and written. Our children are encouraged to answer questions in a complete sentence to develop depth of understanding and reinforce key vocabulary.

Children are expected to be fluent in all times tables and number bonds/relationships by the end of year 4; they can practice their times tables at home on the interactive TT Rock Stars website.

Countdown Maths aids consolidation in key mathematical concepts. Our children complete maths questions on the board first thing each morning. These are pitched using age related objectives and include at least one of each of the four operations  $+$   $-$   $\times$   $\div$  tables and also fluency, word type problems and reasoning. Questions are completed promptly and marked together as a class (with some questions picked out for clarification /misconceptions).

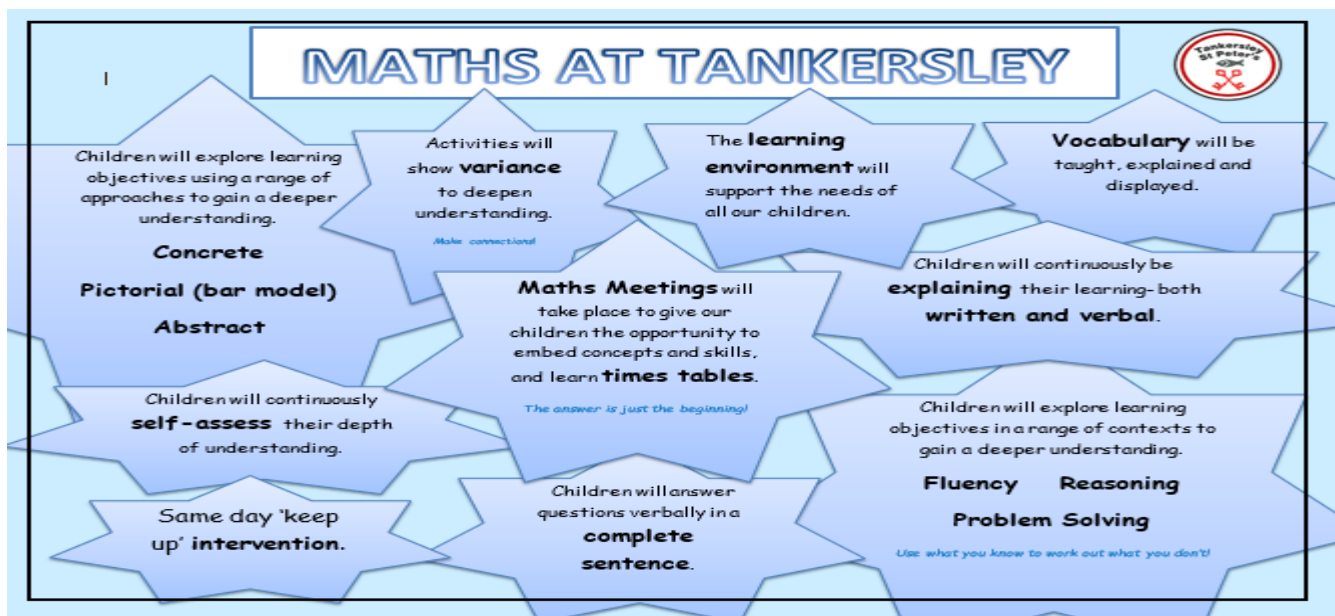
## IMPACT

- Our children enjoy maths and have a positive attitude.

- Children demonstrate a deep understanding of maths. This includes the recollection of times tables.
- Children show confidence in believing that they will achieve.
- Each child makes progress.
- The chance to develop the ability to recognise relationships and make connections in maths lessons.
- Mathematical concepts or skills are mastered when a child can show it in multiple ways, using the mathematical language to explain their ideas, and can independently apply the concept to new problems.

## Substantive and Disciplinary Knowledge in Mathematics

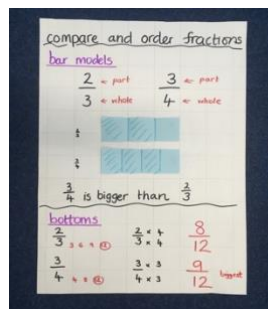
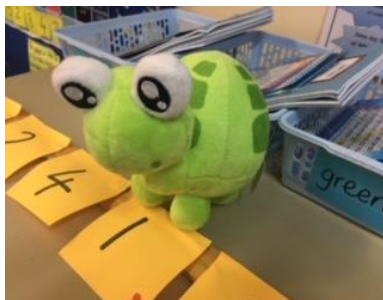
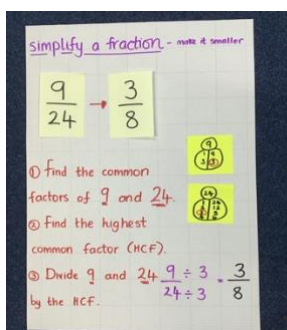
Children need substantive knowledge in mathematics (eg. number facts, times tables) and disciplinary knowledge (how to work things about, reason and problem solve). They will be taught to make links across different mathematical components to build this knowledge in their long term memory.



## Our Learning Environment

It is important to us that the classroom environment supports both the teaching and learning of mathematics and that it meets the needs of all our learners.

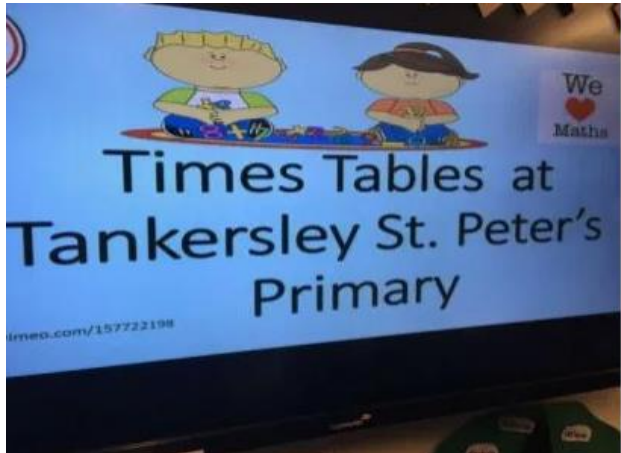
In every classroom, resources such as learning walls, vocabulary, WAGOLLS, use what you know to work out what you don't slogan, number lines, 100 squares, place value charts, multiplication tables etc are accessible for whole class, group or individual work.





### Maths Ambassadors/ Times Table Buddies

Our marvellous year 6 Maths Ambassadors enjoy supporting all classes in our school every half term. They enjoy explaining their learning to other children whilst at the same time supporting other children as well as deepening their own understanding. Our Maths Ambassadors also support at our workshops for parents such as the progression in written calculations and times tables. In their role as TT Buddies, our ambassadors support children in KS2 to develop times table recall by playing games.



### Homework

We recognise the importance of making links between home and school and encourage parental involvement with the learning of mathematics. Homework provides opportunities for the children to consolidate their knowledge and skills, as well as develop their understanding. It also gives our children many opportunities to share their mathematical learning with their family.

My Maths and TT Rock Stars is an online interactive homework tool we use for homework.



Julius Caesar needs 7779 Roman soldiers to travel to Britain.  
Each ship holds 32 soldiers.  
How many ships does he need to transport **all** the soldiers?



### Cross Curricular Links

Many cross curricular links are made through mathematics here at Tankersley. For example problem solving activities may link to the termly topic.

### Equal Opportunities and Inclusion

We ensure equal access for all children to the curriculum. Our staff plan activities so that all our children are able to develop their knowledge, skills and understanding in the subject. This may include adapting teaching, objective outcomes and content in the lessons to suit different learning styles and abilities. Our curriculum will meet the current learners in the cohort and adaptations are made where necessary. Accessibility to the curriculum is always prioritised - visual aids, scaffolding, specialist equipment and other learning prompts are planned in where needed.

We recognise that children have a wide range of abilities and ensure that we provide suitable learning opportunities for all our children by matching the challenge of the task to the ability of the child. We achieve this in a variety of ways:

- setting tasks which are open-ended and can have a variety of responses
- using variation
- providing a wide variety of resources and aids

### Assessment, Recording and Reporting

#### Day-to-day Assessments

As part of the ongoing teaching and learning process, teachers assess children's understanding, achievement and progress in mathematics. Assessment may be based upon observations, questioning, informal and formal testing, on the spot, incisive feedback and the marking and evaluation of work. This will inform day-to-day teaching and learning and provide feedback to children. Our children are also be taught to assess and evaluate their own achievements by recognising successes, learning from their own mistakes and identifying areas for improvement. Our children self assess their maths work by completing a learning line before and after the lesson as well as completing an end of teaching sequence challenge in KS2. Teachers use a variety of AFL strategies to assess learning, attainment and progress.

#### Formal Assessment

Formal assessments take place termly. Teachers assess mathematical themes taught during the term using the Maths Mastery assessments. These assessments allow us to analyse gaps in learning and to analyse attainment- are the children at national expectations, above national

expectations or below (based on the end of key stage thresholds). We also use the EMAG tool (EYFS) to track attainment and progress. This data is fed back to the Headteacher at pupil progress meetings where attainment and progress from prior starting points are put into the school tracking system/matrices and target groups are set.

### Marking

We ensure that our marking provides positive feedback about the achievements and progress made. Children are encouraged to reflect on the feedback using a green 'polishing pen' and to explain their learning at every opportunity. Incisive feedback is provided throughout the lesson so that all our children are aware of their successes, any misconceptions and targets to move their learning forward. We use the **TS** (teacher support) symbol as evidence when a child has needed support.

### Developing and Monitoring and Subject in the Spotlight

As part of the school's drive to ensure all subjects are given equal status and to provide a broad and balanced curriculum the school has a yearly subject overview as part of the **Subject in the Spotlight**. This involves each subject lead developing an action plan for their subject area and monitoring the subject across school through work scrutiny, developing policy, keeping a portfolio of subject progression and celebration in the subject as well as dedicated time for whole school display.

Maths is developed and monitored through: staff development and training, book and work scrutiny, learning walks and paired enquiry. These are carried out by the Senior Leadership Team, subject lead and staff.

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