

Church Vale Primary School



Maths Policy

Review Date	Oct 2025
Review Schedule	Annual
Persons Responsible	Maths Subject Leader

Intent

The national curriculum for mathematics aims to ensure that all pupils:

- become **fluent** in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils have conceptual understanding and are able to recall and apply their knowledge rapidly and accurately to problems
- **reason mathematically** by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language
- can **solve problems** by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions

The intent of Church Vale's mathematics curriculum is to enable our pupils to be able to 'think like mathematicians'. Through a mastery approach, we aim for our children to understand that mathematics is a life skill. It is an essential element of communication, widely used in society, both in everyday situations and in the world of work. We want children to understand that mathematics is all around us and that being a good mathematician opens up endless possibilities.

Why we teach mathematics at Church Vale:

- To equip pupils with the mathematics they need to become numerate.
- To develop their ability to apply mathematical skills with confidence and understanding when solving problems, including problems from everyday contexts.
- To enable pupils to express themselves and their ideas using the language of mathematics with assurance.
- To develop positive attitudes to mathematics, recognising that mathematics can be both useful and enjoyable.
- To nurture a fascination and excitement of mathematics.
- To be able to use and apply the skills in other curricular areas.
- To promote enjoyment and enthusiasm for learning through practical activity, exploration and discussion.

Teaching and Learning Style

At Church Vale we use the mastery approach to ensure that all children have the same opportunities to achieve in maths.

Teaching

Teachers should teach maths through discrete maths lesson and where appropriate some maths lessons may be taught in a cross curricular manner. At Church Vale, you will see the same structure to maths lessons throughout the year groups. Please see '*A Maths Lesson at Church Vale*' document to see this structure.

We strongly believe in the concrete, pictorial, aspect to teaching maths and you will evidently find this within our books. Because of this children use a wide range of resources and models such as number lines, part whole models, bar models, Numicon, number squares, digit cards and place value counters to embed ideas into the children's long term memory.

Expectation

The expectation is that the majority of pupils will move through the programmes of study at broadly the same pace. However, we do understand that some children cannot access their year group and they will be given work at their level when needed.

Pupils who grasp concepts rapidly should be challenged to think broadly to embed their mastery skills within the Learning Objective and offer a further mastery experience.

Interventions

Maths interventions should be offered to those children whose progress is below and who are not meeting the standard that is needed.

Interventions that Church Vale offer:

- Same Day Intervention

Within maths lessons, we undertake live marking to give children immediate feedback in their learning. At the end of a lesson, if the children didn't meet the learning objective, they will be given orange time with an adult in the afternoon. This is to help close the gaps before we move onto the next lesson.

- Boostering through teacher or teaching assistants

Teaching assistants have time allocated to maths in the afternoon where they 'booster' groups of children that have the same need/gap in their learning. It is done through quick short burst sessions and is continued until the children are confident with a particular aspect. This differs from same day intervention as it targets a particular gap / need that the same group of children show

Planning

Long term planning

The New National Curriculum 2014 provides the long term planning for maths taught in the school. The framework has six main areas of study:

- Numbers (including place value, addition, subtraction, multiplication, division, fractions, decimals and percentages)
- Ratio and Proportion
- Algebra
- Measurement
- Geometry
- Statistics

At Church Vale, to ensure that all subject areas are given the time and dedication they need, we follow White Rose's long term overview so each teacher is aware of time limitations. This is monitored through termly book scrutinies. Each teacher has re-designed their year groups overview to enable the development of moving knowledge from short term to long term memory.

Short Term Planning

The school allows teachers to plan maths following a format that works for them. Teachers use a range of resources to help them plan and collate a wide range of problems to help broaden children mathematical knowledge.

Class teachers take the small steps from White Rose and use their own judgements as to the order of delivery and timing as we are aware that it needs to be flexible in response to learning.

Assessment

Short Term

Short Term Assessment will be an informal part of every lesson to check understanding and to give the teacher information, which will help to adjust day to day lesson plans. Teachers will live mark children's work, giving them feedback and key areas they need to work on. Marking will follow the schools marking policy.

Medium Term

Medium Term Assessment will take place three times a year in the form of data submission, and work scrutinies. At the end of each term, each class will also complete a White Rose assessment to track where children are. Work scrutinies are internal and a family of school moderation is also completed to ensure accuracy of assessment. Progress of children will be tracked using the appropriate Year Group objectives. Class teachers are expected to identify children who are below their expected progress and set up appropriate intervention.

Monitoring

Monitoring of the standards of children's work and of quality of teaching in mathematics is the responsibility of the SLT, supported by the subject leaders and governors.

The maths subject leader will attend regular network meetings, monitor pupils' books, talk to pupils and observe classroom practice through learning walks. In addition, the work of the subject leader involves supporting colleagues in the teaching of mathematics and informing teachers about current developments in the subject.

The mathematics subject leader gives the head teacher an annual summary in which s/he evaluates strengths and weaknesses in the subject and indicates areas for further improvement. An action plan to address issues is created every academic year.

Resources and Display

In our school we have various resources available in the classroom:

- A range of models and images, age appropriate equipment (class based) practical maths equipment (centrally stored).
- Numicon throughout FS, KS1 and KS2
- Children are encouraged to work independently where appropriate within the classroom, selecting the appropriate equipment they need in order to complete the task. They are expected to use it properly and appropriately and return to its correct place when an activity is completed.
- We recognise the importance of a stimulating learning environment. The school provides an environment which is rich in a wide variety of print, pictures, diagrams, charts, tables, models and images.

Display

Each classroom has a maths display area, which includes a working wall with mathematical vocabulary, visual aids and clear worked through examples.

Annotations from classwork will be present to remind the children what they have done previously.

The display should celebrate maths and be well placed in the classroom.

Times Tables

At Church Vale, the quick recall of multiplication and division facts (times tables) are viewed with high importance. The ability to recall these facts quickly enables children to answer related questions with ease.

According to the new National Curriculum 2014 the expectation of times tables in each Year Group is as follows:

Year 2: 2x, 5x, 10x

Year 3: 3x, 4x, 8x

Year 4: 6x, 7x, 9x, 11x, 12x (All times tables should be known by the end of year 4)

Year 5: All $\times$ and $\div$ facts (12x12)

Year 6: All $\times$ and $\div$ facts (12x12) and related language/symbols e.g. % and square root

By the end of year 4, children will take the national times table test. To prepare the children for this, Church Vale has invested in Times Table Rockstars, an online game in which the children can create their own rockstar. They work through the times tables to earn coins so they can buy extra designs for their rockstar. This is available for year groups 2-6.

To encourage children to learn their times tables, we run a times tables mileage, at the end of each half term if children have practiced their times tables enough at home the children will be part of a special treat.

Progression from Foundation

Number

In Foundation we sing number rhymes (one more and one less) and number songs. Daily counting sessions and opportunities to rote count take place, for example we use everyday occasions to count people, objects and actions. We compare quantities using milk and fruit time, voting and play, such as sorting (who has more, who has less). Subitising opportunities will be available through dice activities, simple card games and dot patterns. We understand composition of number using 10 frames, part-part whole and Numicon. We drive understanding and recognition of number through number of the week using the Number Blocks resources.

Once we have secured a basic knowledge of number, children move towards problem solving including representing patterns within numbers, odds and evens, doubling facts and number bonds to 5 and 10.

Measurement

We develop an understanding and use of language related to different units of measurement by talking to the children about size, weight, capacity and length, using high quality provision to provide opportunities for children. Children will be given opportunities to compare and contrast measurement. e.g. by providing three different sizes for jugs, sieves, cylinders for them to explore.

Children understand the basic concept of time through daily visual timetabling, introduction of language to be able to sequence familiar events. The days of the week song is sung daily. Timers are used to help with turn taking.

Geometry

We use propositional vocabulary through everyday occasions by explaining to each other where to find an object, tidying away and looking at maps linked to People, Culture and Communities. We provide opportunities for the children to manipulate shapes and develop spacial reasoning through physical activities such as obstacle courses, making maps, printing with shapes and small construction. We encourage the children to notice and talk about the patterns they see in the environment and books, enabling them to create their own pattern and correct a repeating pattern.

Statistics

Our Foundation children are exposed to statistics using concepts such as voting to talk about preferences, the children display this with pictures and comparing quantity.