Wardley CE Primary School
Maths Policy

Name of Reviewer	Kari Walker
Date of Approval of Governing Body	September 2023
Signature of Chair	*Alan Johns*
Signature of Head	*Mark Foster*
Date Due for Review	September 2026

EQUALITY STATEMENT

As a school we welcome our duties under the Equality Act 2010. The general duties are to:

- eliminate discrimination, harassment and victimisation
- advance equality of opportunity
- foster good relations

We review all policies and procedures we operate to ensure there are no negative equality impacts based on the following protected characteristics: age, disability, ethnicity & race, gender (sex), gender identity & reassignment, pregnancy & maternity, sexual orientation, religion & belief and non-belief as outlined in the Equality Act 2010. If you feel, on reading this policy that there may be a negative equality impact, please tell us about this. Please also let us know if you need to access this policy in a different format. You can do this by contacting the school office.

Our school vision

We are a Church of England school that values and recognises the uniqueness of each individual child and acknowledges their fundamental right to be educated to their full potential in a safe, secure and caring environment. Our ethos is built on Christian foundations and drives our belief that we can do all things.

Wardley CE Primary School is committed to continual improvement to ensure that what we do today is even better tomorrow. We provide a happy, secure and supportive learning environment where the children develop independence and work hard to make the most of their talents, and that 'We can do all things' within a deep and rich curriculum.

We can do all things through Christ who strengthens us. Phillippians 4:13

Practical ways in which we attempt to carry out our school vision

Through the Christian value of respect:
-Having strong ethics to underpin our decision making and actions.
-Creating an environment which promotes the Christian ethos of trust, respect and honesty to enable people to flourish.
-Promoting a sense of justice.
-Creating a strong moral purpose which underpins everything we do

Through the Christian value of friendship:
-Having an inclusive ethos to create a school in which everyone is welcome and everyone is equal.
-In celebrating diversity we value the strengths of all and embrace differences.
-Engaging stakeholders within and beyond the school.

Through the Christian value of trust:
-Having a strong sense of teamwork amongst all members of the school community.
-No matter how small, we value every contribution and support each other to reach our goals.
-In respecting each other, we strive to not let each other down.
-In feeling valued and empowered people have a desire to go the extra mile.

Through the Christian value of courage
-Recognising, supporting and developing everyone's potential.
-Nurturing skills and promoting opportunities.
-Creating an environment for people to think positively and take risks.

Through the Christian value of perseverance:
-Through continual enhancement we are constantly striving to achieve high standards, we never stand still.
-All improvements are underpinned with high aspirations.
-When problems arise, we must hold on to our vision and find solutions.

-We inspire and innovate and we support others to do the same.

Spiritual Moral Social & Cultural Statement

In our mathematics curriculum at Wardley CE Primary School pupils are encouraged to delve deeply into their understanding of mathematics and how it relates to the world around them. Our maths teaching actively encourages risk taking which enables pupils to explore and try new ideas without the fear of failure. This is fundamental to building pupils' self-esteem within mathematics. Throughout history, the study of mathematics stems from intrigue and curiosity, with people's desire to pose and solve problems relating to the real world or purely within mathematics itself. We aim for our students to appreciate this and use their own maths to explore and question the way the world works and also to apply their reasoning to puzzles for their personal satisfaction.

Spiritual development

At Wardley CE Primary School we use maths to support our children's spiritual development by helping them to develop deep thinking and question the way in which the world works. We want them to feel delight when they have shown resilience and are able to solve questions they once found difficult to solve. Mathematics helps children to make informed decisions in life, based on the skills and confidence gained from choosing the most appropriate method in solving problems. These skills are transferable to real-life situations and therefore help the children become more reflective, responsible and insightful individuals.

Moral development

Moral development is supported through discussion about mathematical understanding, challenging assumptions and supporting children to question information and data that they are presented with. We provide reasoning opportunities where the children are encouraged to prove their answer and give reasons for their thoughts. This allows them to evidence their views not just in maths but in the wider world.

Social development

At Wardley CE Primary School, self-esteem and building self-confidence is integral to social development and we use metacognitive strategies to support this. Collaborative learning is encouraged at Wardley CE Primary School in the form of listening and learning from each other. Working cooperatively enables the children to think for themselves and promotes the retention of new learning. The children are able to see the benefits of working together as a team and they understand that collaboration is key to success.

Cultural development

Maths supports pupil's cultural development by developing an appreciation that mathematical language and symbols have developed from many different cultures around the world. Mathematics also supports the cultural development of a child by exposing them to a range of different approaches to solving problems and reasoning skills.

Intent

At Wardley CE Primary School we see maths as an essential part of everyday life. When leaving primary school, children need to have sound numeracy and the ability to reason and enquire mathematically. Curiosity and pleasure in maths drive science, technology and engineering, and are essential to understanding and development in these areas.

However, it is common to hear people say they are 'no good at maths' or state that they 'can't do maths!" People are far less likely to admit that they can't read or write.

At Wardley CE Primary School, we aim to foster a 'can do' attitude towards maths. If we feel we can't do it, the sentence is always followed with YET! "I can't do it yet!" This makes us believe we will be able to do it, we just haven't quite learnt all the skills we need to solve the problem. This growth mind-set approach towards maths helps us all to achieve more than we believe we can.To be a mathematician at Wardley means that you will have:

• An understanding of the important concepts and an ability to make connections within mathematics.
• A broad range of skills in using and applying mathematics.

• Fluent knowledge and recall of number facts and the number system.

• The ability to show initiative in solving problems in a wide range of contexts, including the new or unusual.

• The ability to think independently and to persevere when faced with challenges, showing a confidence of success.

• The ability to embrace the value of learning from mistakes and false starts.

• The ability to reason, generalise and make sense of solutions.

• Fluency in performing written and mental calculations and mathematical techniques.

• A wide range of mathematical vocabulary.

• A commitment to and passion for the subject.

We are committed to ensuring that children are able to recognise the importance of maths in the wider world and that they are also able to use their mathematical skills and knowledge confidently in their lives in a range of different contexts. We want all children to enjoy mathematics and to experience success in the subject, with the ability to reason mathematically. We are committed to developing children's curiosity about the subject, as well as an appreciation of the beauty and power of mathematics.

Mathematics is a journey and long-term goal, achieved through exploration, clarification, practice and application over time. At each stage of learning, children should be able to demonstrate a deep, conceptual understanding of the topic and be able to build on this over time.

Our assessment policy outlines three levels of learning:

Basic learning: surface, temporary, needs consolidating and revisiting.

Advancing learning: it sticks, can be recalled and used

Deep learning: can be transferred and applied in different contexts

At Wardley CE Primary School, advancing and deep levels are what we are aiming for by teaching maths using the Mastery approach. Mathematics is an essential part of a balanced curriculum that is both well matched and challenging to the learner's needs.

Implementation

At Wardley we follow the 2014 National Curriculum, enriching and structuring it to meet the needs of our students.

The focus of our maths curriculum is on teaching to mastery by ensuring a child thoroughly comprehends a topic before moving on. Ideas are revisited in a spiral as children progress through the school, each time at a higher level. We empathise problem-solving skills and pupils using their core competencies to develop a relational understanding of mathematical concepts. To assist in this we use the Maths – No Problem! scheme of work. This is a Singapore method of teaching mathematics that develops pupils' mathematical ability and confidence. The features of our maths teaching therefore include:

- ✔ Emphasis on problem solving and comprehension, allowing children to relate what they learn and to connect knowledge
- ✔ Careful scaffolding of core competencies of:
- ✔ visualisation, as a platform for comprehension
- ✔ mental strategies, to develop decision making abilities

- ✔ pattern recognition, to support the ability to make connections and generalise
- ✔ Emphasis on the foundations for learning and not on the content itself so children learn to think mathematically as opposed to merely reciting formulas or procedures

It is based upon nine units which the children continually re-visit within a spiral curriculum. They are: Number and Place Value; Addition and Subtraction; Multiplication and Division; Fractions; Decimals and Percentages; Statistics; Time and Money; Other Measures; Shape; and Position and Direction.

Through these units we develop the following **key mathematical threshold concepts**:

- To know and use numbers
- To add and subtract
- To multiply and divide
- To use fractions
- To understand the properties of shapes
- To describe position, direction and movement
- To use measures
- To use statistics
- To use algebra

The content and principles underpinning the 2014 Mathematics curriculum and the maths curriculum at Wardley CE Primary School aims to reflect those advocated by the mastery approach found in high-performing education systems internationally. All teachers use the **five big ideas of mastery (coherence, representation and structure, mathematical thinking, fluency and variation)** within their day to day teaching. These principles and features characterise this approach and convey how our curriculum is implemented.

The school has implemented the Maths No Problem Scheme of Learning – a 'mastery' curriculum approach to the teaching of mathematics. This ensures that children can focus for longer on each specific area of maths and develop a more secure understanding over time. This approach is also designed to enable children to progress to a greater depth of understanding. Subsequent blocks continue to consolidate previous learning so that the children continually practise key skills and can recognise how different aspects of maths are linked. For example, when children have completed a block which has enabled them to master the multiplication of two-digit numbers, a subsequent block on area and shape might provide

opportunities to use this understanding when calculating the area of shapes with 2-digit length and width dimensions. Opportunities within the school's curriculum will also allow the children to apply their maths understanding in context. In addition to the curriculum approach, teachers facilitate daily 'Maths Meetings' to recap previously taught objectives including those objectives from the previous year group.

What you will see in our Maths lessons…

At Wardley CE Primary School we use a variety of teaching and learning styles in mathematics lessons. Our principal aim is to develop children's knowledge, skills and understanding in mathematics. We do this through a daily lesson that has a high proportion of whole-class and group-direct teaching in Key Stage 1 and 2.

During these lessons, we encourage children to ask as well as answer mathematical questions in which children aim to answer in full sentences. Children at Wardley CE Primary School use a wide range of resources such as egg boxes, base tens, counters, multi-link cubes, number lines, number squares, Numicon and small apparatus to support their work.

Children are given the opportunity to develop fluency, recall facts and recap previous learning through starters in which we recapp the objectives from the previous areas of mathematics taught.

• Teachers reinforce an expectation that all children can achieve high standards in mathematics.

• Many children progress through the curriculum content at the same pace. Adaptation is achieved by emphasising deep knowledge and through individual support (scaffolding and questioning) as well as intervention.

• Teaching is underpinned by methodical curriculum design and supported by carefully crafted lessons and resources to foster deep conceptual and procedural knowledge.

• Practice and consolidation play a central role. Carefully designed variation within this builds fluency and understanding of underlying mathematical concepts.

• Teachers use precise questioning in class to test conceptual and procedural knowledge and assess children regularly to identify those requiring intervention, so that all children keep up. In a typical lesson, the teacher leads back and forth interaction, including questioning, short tasks, explanation, demonstration, and discussion. Some new concepts are shared within the context of an initial related problem, which children are able to discuss in partners. This initial problem solving activity prompts discussion and reasoning, as well as promoting an awareness of maths in relatable real-life contexts that link to other areas of learning. In KS1, these problems are almost always presented with objects (concrete manipulatives) for children to use. Children may also use manipulatives in KS2.

• Teachers use careful questions to draw out children's discussions and their reasoning. The class teacher then leads children through strategies for solving the problem, including those already discussed. Independent work provides the means for all children to develop their fluency further, before progressing to more complex related problems. Mathematical topics are taught in blocks, to enable the achievement of 'mastery' over time. Each lesson phase provides the means to achieve greater depth, with more able children being offered rich and sophisticated problems, as well as exploratory, investigative tasks, within the lesson as appropriate.

5 A Day and Maths Starters

5 A Day and Maths Starters are a vital part of the Mathematics Mastery programme. Their purpose is to consolidate key areas of mathematics or introduce topics to the children away from the current area of maths being taught. These sessions occur daily; 5 A Day when the children enter the classroom in the morning and maths starters for the opening 15 minutes of all maths lessons. Both sessions cover several mathematical areas, broken down into short segments.

5 A Day focuses on the 4 written methods of mathematics with a final section focusing on a different area for example shape and space or fractions, decimals & percentages.

The Maths Starters focus on times tables followed by a range of problem solving and calculations engaging all areas of the maths curriculum to ensure continuous revisiting and a deeper understanding of the key concepts in mathematics.

5 A days and Maths Starters aim to:

• Give students repeated practice of basic skills and concepts (fluency, consolidation, mastery of what has been taught)

• Allow the teacher to assess children's prior learning.

• Be a whole-class ritual for embedding maths skills

• Establish a routine for starting mathematical thinking in the day, building classroom culture, and making connections with mathematics in everyday life.

5 A Day and Maths Starters expectations:

• 100% of the class must be ready to respond

• No hands up approach - anyone can be asked a question or to offer a mathematical solution at any time

• Teacher only accepts appropriate responses, including associated vocabulary and full sentences when appropriate.

Teaching Methods and Approaches

We use the Maths – No Problem! scheme which uses the ideas from Singapore maths as a support for our maths teaching across the school. Ofsted, the National Centre for Teaching Mathematics (NCETM), the Department for Education, and the National Curriculum Review Committee have all emphasised the pedagogy and heuristics used by Singapore.

The teaching focuses on three modes of representation of mathematical ideas: the enactive, iconic and symbolic modes. Children are introduced to an idea through concrete apparatus (things they can touch and hold) and visual representations (things they can see) to help children to conceptualise and solve problems, allowing them to approach complicated problems, investigate and reason through them. Through this approach children gain confidence as independent learners who are able to use resources and show resilience in solving problems.

The daily maths lessons at Wardley have certain key features:

1. Times tables/Counting

• Learning facts by heart is key to making sustained progress in mathematics: children can use the solution to one problem to help solve others.

• Each year group has counting and times table focuses that are revised, recited and recalled in short sharp bursts every day.

2. 5 A day and Maths Starters

• Being able to solve problems in your head helps to develop mathematical confidence, flexibility with numbers, and understanding of place value.

• Children need opportunities to rehearse, revise, and refresh mental maths.

• Different objectives and areas of focus are met in line with the National Curriculum.

• Prior learning is consolidated and built upon, deeping mastery skills.

3. Maths story

• A maths story is used to engage, motivate and focus the children on what they are learning.

• The maths story contextualises the learning and allows the children to immediately start connecting their learning with prior knowledge.

4. Modelling and practice

• The teacher demonstrates (models) how to solve the problem.

• This is modelled clearly and consistently with regular opportunities for student participation.

• The children all rehearse this core skill. Over the course of a week students will experience this in groups, pairs and independently.

5. Problem Solving

- The teacher returns to the maths problem and asks students how to solve it using their new skills.
- Students link their new skills to a problem which either requires them to solve a problem, prove something, test a statement or give an explanation.
- Students often find making links from one problem to another challenging and so through our questioning and consistency we really focus on this skill. This is particularly underlined in our investigations.

6. Challenges

- Students are given challenges based on the lesson's learning or building upon prior knowledge. These are completed once the lesson's questions have been answered.

The teaching of maths at Wardley CE Primary School provides opportunities for:

• Group work • Paired work • Whole class teaching • Individual work

Pupils engage in:

• Written methods • Practical work • Investigational work • Problem- solving • Mathematical discussion • Consolidation of basic skills and routines.

At Wardley CE Primary School we recognise the importance of establishing a secure foundation in mental calculation and recall of number facts before standard written methods are introduced. A variety of teaching styles will allow for children's individual learning styles to be catered for. Children must be taught the appropriate language linked to the concepts they are being taught. This should occur at all levels. Children must know and be encouraged to use the vocabulary in the right context. We endeavour to set work that is challenging, motivating and encourages the pupils to talk about what they are learning.

A typical Maths lesson lasts approximately 1 hour. Maths is taught during the morning. Children begin with a short starter or 'Warm Up' activity which supports fluency in and the recall of number facts and/ or an anchor task to embed them into their learning for that day. Following this, children develop their Mathematical fluency and reasoning and problems solving skills. Discussion is promoted to ensure that mathematical ideas are introduced in a logical way to support conceptual

understanding and children often are asked to share their thoughts. Teachers use careful questions to draw out children's discussions and their reasoning and the children learn from misconceptions through whole class reasoning. Following this, the children are presented with varied similar problems which they might discuss with a partner or within a small group. At this point, scaffolding is carefully reduced to prepare children for independent practice.

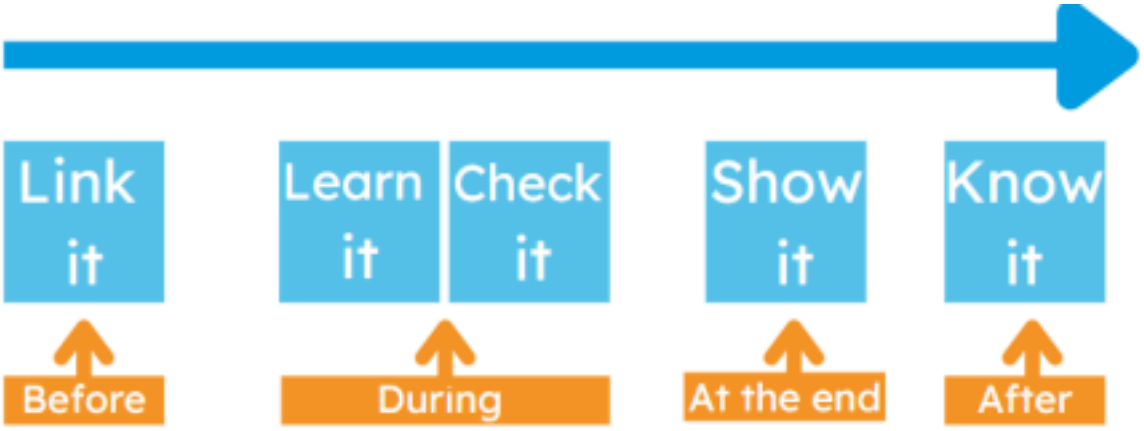
The children might discuss their work in pairs with a partner and record some of their working out in their maths books. The teacher uses this part of the lesson to address any initial errors and confirm the different methods and strategies that can be used.

All of this is recorded in their pupils' Maths Journal. Pupils are encouraged to record their thoughts and learning as well as any answers in their journals.

The class then progresses to the 'Independent application' part of the lesson, which is designed to be completed independently.

On completion of the independent task, pupils are given the opportunity to complete a 'Challenge'. This is depicted by a gold star in their maths journals.

At Wardley CE Primary School we place five pedagogical principles at the heart of our maths curriculum and we have ensured that there is time spent on the intent of how we deliver this. Our aim is for the children to 'remember more and know more".



Link It: At the beginning of a unit of learning teachers carefully link the children's prior learning. Learning starts with igniting pupils' prior knowledge. Research on cognitive load recognises the potential benefits this will have upon long-term retention. Once established, we move onto the 'Learn It' stage where the composite learning is broken down into manageable components.

Learn It: This is new learning. It is often taught through a sequence of lessons that follow a 'line of enquiry'. These are shaped by key questions which guide the children's exposure to new knowledge and link it back to the overarching line of enquiry. Children learn the substantive knowledge required for the area of learning

(based on the essential opportunities) whilst developing their disciplinary knowledge for the subject through the threshold concepts.

Check It: Throughout the 'Learn It' phase, teacher's plan 'Check It' opportunities for adults to review their learning to date. This gives teachers the opportunity to recognise gaps in pupils' knowledge and to enable them to make future decisions based on these assessments. Throughout lessons, the children's understanding will be checked by the teacher through a range of 'Check It' tasks.

Show it: At the end of a sequence of learning, we use 'show it' which is beneficial in enabling pupils to showcase their learning. The children present their learning at the end of each area of learning. This often takes the form of an end of unit reflection activity in which the children bring together their ideas in response to the 'line of enquiry' that they have been following. Importantly, there is encouragement for pupils to come up with innovative ideas.

Know It: At Wardley CE Primary School, we check that the children know more and remember more with a summative activity at the end of each area of learning. As well as this, the children have regular retrieval sessions to retrieve their prior learning to ensure that it is not lost. This would normally be after the area of learning has been concluded and could be later, or even much later, in the school year.

Planning and Resources

The use of mathematics resources is integral to the concrete – pictorial – abstract approach and thus planned into teaching and learning. The school has a wide variety of good quality equipment and resources, both tangible and computing based, to support our learning and teaching. These resources are used by our teachers and children in several ways including:

Demonstrating or modelling an idea, an operation or method of calculation. Resources for this purpose would include: a number line; place value cards; dienes; place value counters and grids; money or coins; measuring equipment for capacity, mass and length; 5 bead strings; the interactive whiteboards and related software; 3D shapes and/or nets; Numicon and related resources and software; multilink cubes; clocks; protractors; calculators; dice; number and fractions' fans; individual whiteboards and pens; and 2D shapes and pattern blocks, amongst other things

Enabling children to use a calculation strategy or method that they couldn't do without help, by using any of the above or other resources as required Standard resources, such as number lines, multi-link cubes, dienes, hundred squares and counters are located within individual classrooms.

Resources within individual classes are accessible to all children who should be encouraged to be responsible for their use. Further resources (often larger items shared by the whole school) are also available as part of a central supply. Resources to support teachers' own professional development and understanding of

new approaches as part of a mastery approach are available on the NCETM platform. As well as overviews of learning, these include short videos which demonstrate new methods to ensure accuracy. Teachers are encouraged to use any school space as an outdoor classroom when possible, for example, when teaching length, area or perimeter.

EYFS

Children in EYFS have a short daily Maths carpet teaching session, during which time they begin to develop their understanding of simple mathematical concepts such as counting to 20, maintaining 1 to 1 correspondence, simple addition and subtraction facts, to recognise and describe simple 2d and 3d shapes. Children are taught these concepts using physical resources, pictorial resources, songs, games and role-play.

In both Nursery and Reception, the independent activities at the Maths tables link to the focus for the week. For example, if the focus for the week is addition, then activities will often link to this.
In addition to these planned independent activities, children also can self-select Maths resources to consolidate their learning during child-initiated activities. We recognise the importance of play-based learning and therefore encourage children to develop their understanding during their play. Such opportunities are provided in both the inside and outside environment. Regular observations and assessments help to ensure that children that need additional intervention to consolidate their mathematical understanding are identified and supported by appropriate interventions.
In Reception, teachers recap and check that the objectives learnt in nursery are secure. This is done through a focussed 'Maths Meeting' led by the teacher on the carpet.

A typical maths lesson consists of;
• Whole class oral and mental starter no more than 10 minutes
• Focused activities
• Finish with Egg box maths

KS1 and KS2

Through Years 1 to 6 we use a coherent programme of high-quality materials and exercises, which are structured with great care to build deep conceptual knowledge alongside developing procedural fluency. This scheme is based on the principles of how mathematics is taught in many high performing jurisdictions in East Asia and aligned with the 2014 National Curriculum. All units of the 2014 National Curriculum are covered. Teachers plan activities and additional tasks which offer support and

provide further challenges for children who can progress further in their learning. Lessons in both key stages follow the same sequence.

Areas of learning

Number

The Programme of Study specifies a progression of number-based skills for children to acquire as they develop their mathematical ability. In order to facilitate this, the teaching staff in Wardley CE Primary School will ensure that:

• Children will be encouraged to use mental calculations where appropriate.

• Children will have the opportunity to discuss and develop a range of calculation strategies.

• Teaching will encourage flexibility of thinking and utilisation of connections within mathematics.

• Children's computational skills will be developed and consolidated using a balance between practice and application in meaningful contexts.

• Opportunities will be provided for children to develop their estimation skills, and will be encouraged to estimate answers before completing calculations.

• Teaching will place a strong emphasis on ensuring children gain a sound understanding of the Place Value basis of the number system.

Shape and Space

The Programme of Study specifies a progression of skills in Shape and Space for children to acquire as they develop their mathematical ability. In order to facilitate this, the teaching staff in Wardley CE Primary School will ensure that:

• Teaching will place emphasis on observing and understanding the properties of 2-D and 3-D shapes.

• Opportunities will be provided for the practical construction and investigation of shapes.

• Children will be given opportunities to explore position and movement in real-life contexts, utilising ICT (including Beebot and Probot) where appropriate.

Measures

The Programme of Study specifies a progression of skills in Measures for children to acquire as they develop their mathematical ability. In order to facilitate this, the teaching staff in Wardley CE Primary School ensure that:

• Children will use a range of measuring equipment in meaningful contexts, and be encouraged to make choices regarding the most suitable equipment.

• Children will follow a progression beginning with direct comparison, through measuring with non-standard units, to measuring with standard units with increasing accuracy.

• Children will be given opportunities to develop estimation skills in all measures.

• Teaching will place strong emphasis on ensuring that children understand that all measurements are approximate, and that they can make sensible decisions on the accuracy necessary in different situations.

Handling Data

The Programme of Study specifies a progression of skills in Handling Data for children to acquire as they develop their mathematical ability. In order to facilitate this, the teaching staff in Wardley CE Primary School will ensure that:

• Teaching will be designed to ensure that children understand that the collection, representation and interpretation of data is a means through which real-life decisions can be made.

• Handling Data skills are used as a means of solving problems, through a four-point process: pose a question; collect data; organise, display & interpret data; answer original question.

• Children will be given opportunities to make decisions regarding what information is collected, how it is collected, how information is processed and how it is displayed.

• Children will be given opportunities to apply data handling skills in a range of contexts, across subject areas.

• Children will be given opportunities to develop an increasing range of ICT based handling data skills.

Links to the Wider Curriculum

At Wardley CE Primary School connections between maths and the wider curriculum are made wherever possible to give the children the opportunity to engage in the practical application of their maths skills and knowledge.

In Year 6 Pupils complete the '£5 Challenge' whereby they buy and sell goods in order to make profit.

Impact

The school has a supportive ethos and our approaches support the children in developing their collaborative and independent skills, as well as empathy and the need to recognise the achievement of others. Children can underperform in Mathematics because they think they can't do it or are not naturally good at it. Our curriculum addresses these preconceptions by ensuring that all children experience challenge and success in mathematics by developing a growth mindset. Regular and ongoing assessment informs teaching, as well as intervention, to support and enable the success of each child. These factors ensure that we can maintain high standards, with achievement at the end of KS2 growing in time to be in line with the National Average and seeing a higher proportion of children demonstrating greater depth, at the end of each phase.

The impact of the subject can be seen in the progress that the pupils make. This can be seen as knowing more, remembering more and being able to do more. It is about the pupils developing their ability to think geographically. It is about connecting existing and new knowledge, developing competence and making links. Assessment is both formative as children learn and summative to evaluate the gains that have been made. It is kept to the minimum necessary to be fit for its purpose.

At Wardley CE Primary School assessment is in line with the school's assessment policy. Teachers are expected to assess at the end of each topic against the subject's threshold concepts (disciplinary knowledge) and the subject's substantive knowledge, which enables teachers to track each child's progress. These are based on the subject's National Curriculum programme of study,

The way we assess this progress includes the following practice (as set out in the school's teaching & learning policy and assessment policy).

The structure of the teaching sequence ensures that children know how to be successful in their independent work. Some guided practice provides further preparation for children to be able to apply the skills, knowledge and strategies taught during the beginning part of the maths lesson. Common misconceptions are addressed within the teaching sequence and key understanding within each 'small step' is reviewed and checked by the teacher and the children before progression to further depth.

At the end of the lesson, the children review their work and self and peer assessment are used consistently as outlined by the school's 'Feedback Policy'.

Opportunities for additional practice and correction are provided by the teacher, as appropriate, during marking, with a focus on promoting and achieving a growth mindset within the subject.

• On-going formative assessment- this includes the use of day to day assessment for learning classroom practice and feedback. Short term assessment is a feature of each lesson. Observations and careful questioning enable teachers to adjust lessons and brief other adults in the class if necessary. The lesson structure of Maths is designed to support this process and the 'reflect or check out' task at the end of each lesson also allows for misconceptions to be addressed.

At the end of each blocked unit of work, the children also complete the carefully aligned Maths - No problem! assessment. The outcome of this is used by the teacher to ensure that any identified gaps in understanding can be addressed before the next unit is taught. Each child's scores are also input on a class spreadsheet, which provides an overview of achievement in each specific area within the programme of study. This also informs dialogue with parents and carers during open evenings, as well as the judgements made at the end of the term as to the extent that each child has demonstrated mastery of each 'fundamental' objective.

Teachers administer NFER termly assessments for arithmetic and reasoning. The results of these papers are used to identify children's ongoing target areas, which are communicated to the children, as well as to parents and carers at Parents conferences. They are also used alongside unit assessments and outcomes of work, to inform the whole school tracking of attainment and progress for each child during pupil progress meetings. Assessment data in maths is reviewed throughout the year to inform bespoke interventions and to also ensure that provision remains well-informed to enable optimum progress and achievement. End of year data is used to measure the extent to which attainment gaps for individuals and identified groups of learners are being closed. This data is used to inform whole school and subject development priorities for the next school year.

Role of the subject leader.

The maths subject leaders at Wardley CE Primary School are Mrs K. Walker and Mrs K. Flanagan.

Their roles as subject leaders are to act as a guardian of the standards in the subject.

This means that they know:

• How well pupils achieve.

• What the strengths of provision are

• What needs to be done to improve outcomes.

To achieve this subject leaders undertake the following monitoring activities on a termly basis:

• Lesson observations.

• Monitoring of children's books.

• Discussions with both adults and children.

• Looking at classroom displays.

In addition subject leaders will:

• Support staff in their development of planning and to monitor planning.

• Facilitate the sharing of good practice among staff.

• Work together with colleagues to raise standards.

• Ensure that the policy documents and curriculum resources remain useful and current.

Links to home

The school recognises that parents and carers have a valuable role to play in supporting their child's mathematical learning. An overview of the maths curriculum is available on the school's website, as well as guidance in the progression in calculation methods used by the school. Paper copies of these documents are also available on request and the Curriculum Leaflets, sent home by each year group, each half term also outline the maths topics to be covered.

• Parents are informed of their child's progress at Parents Evenings and this is also communicated in written school reports.

• Parents and carers are encouraged to speak to their child's teacher at any point during the year, either informally or by making a specific appointment.

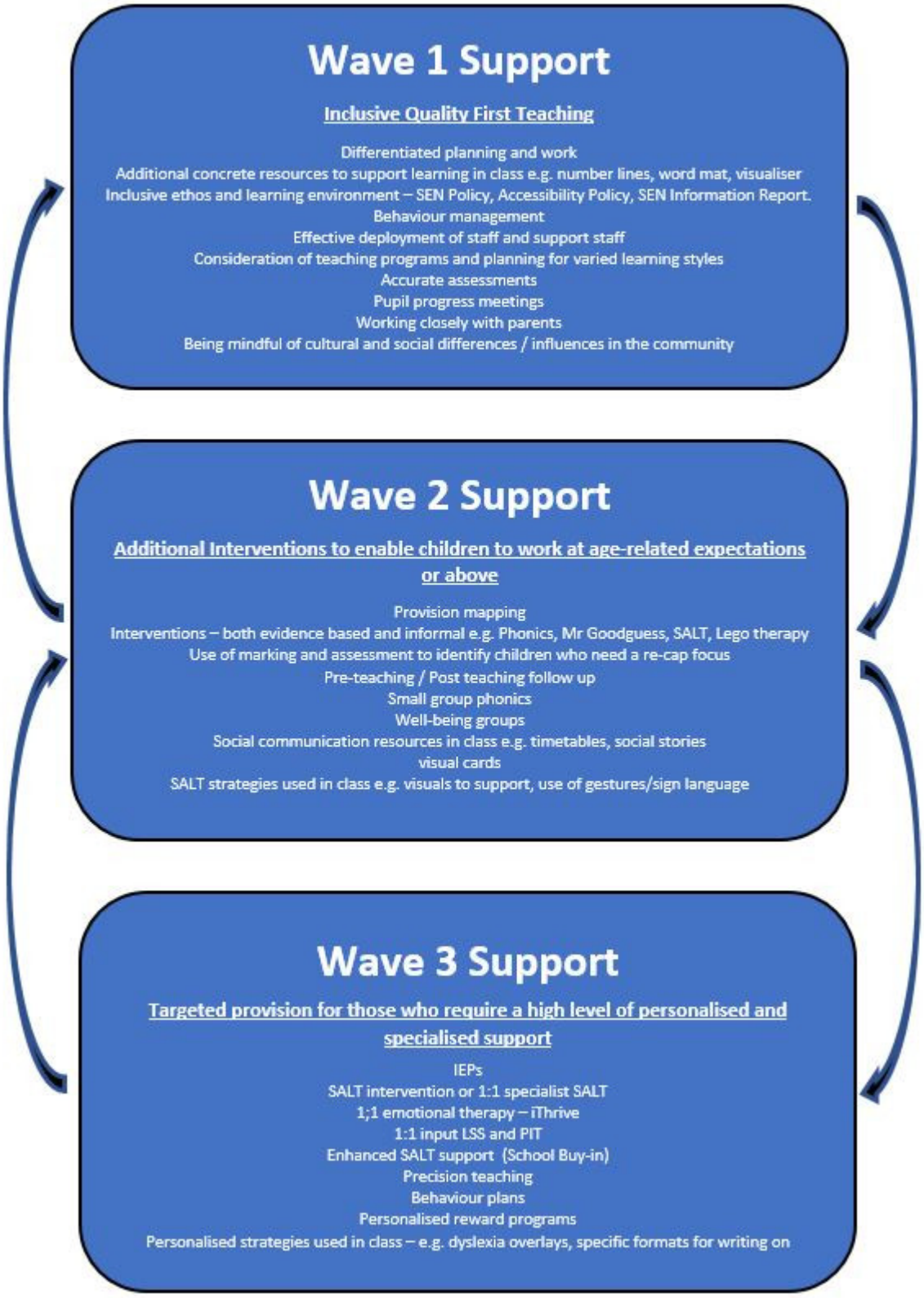
• The school also provides several opportunities for parents/carers to learn about what their child is learning through regular parent 'drop-ins' where they can see their child's work and speak to the class teacher.

Inclusion

At Wardley CE Primary School all children have access to mathematics lessons and activities regardless of their characteristics or ability. Teaching approaches provide equality of opportunity by making sure the work is suitable for all, regardless of gender, considering religious and cultural beliefs and enabling those with disabilities to have full participation

Through adaptive teaching we provide all children with the tools and support to be involved and access every history lesson. This is the ‘low threshold, high ceiling’ model of teaching and learning that is set out in our teaching and learning policy.

To promote an inclusive environment in mathematics we will use the following provision model:


Wave 1 Support
Inclusive Quality First Teaching
Differentiated planning and work
Additional concrete resources to support learning in class e.g. number lines, word mat, visualiser
Inclusive ethos and learning environment – SEN Policy, Accessibility Policy, SEN Information Report.
Behaviour management
Effective deployment of staff and support staff
Consideration of teaching programs and planning for varied learning styles
Accurate assessments
Pupil progress meetings
Working closely with parents
Being mindful of cultural and social differences / influences in the community
Wave 2 Support
Additional Interventions to enable children to work at age-related expectations or above
Provision mapping
Interventions – both evidence based and informal e.g. Phonics, Mr Goodguess, SALT, Lego therapy
Use of marking and assessment to identify children who need a re-cap focus
Pre-teaching / Post teaching follow up
Small group phonics
Well-being groups
Social communication resources in class e.g. timetables, social stories
visual cards
SALT strategies used in class e.g. visuals to support, use of gestures/sign language
Wave 3 Support
Targeted provision for those who require a high level of personalised and specialised support
IEPs
SALT intervention or 1:1 specialist SALT
1;1 emotional therapy – iThrive
1:1 input LSS and PIT
Enhanced SALT support (School Buy-in)
Precision teaching
Behaviour plans
Personalised reward programs
Personalised strategies used in class – e.g. dyslexia overlays, specific formats for writing on