

# Widney Junior School



## Maths Policy

Mrs Charlotte Boulton

*Inspiring a community where learning is irresistible, everyone is valued and success is limitless.*

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This document is a statement of aims, principles and strategies for teaching and learning of Mathematics at Widney Junior School. It represents a consensus of opinions after consultation between teaching staff, pupils and the governing body.

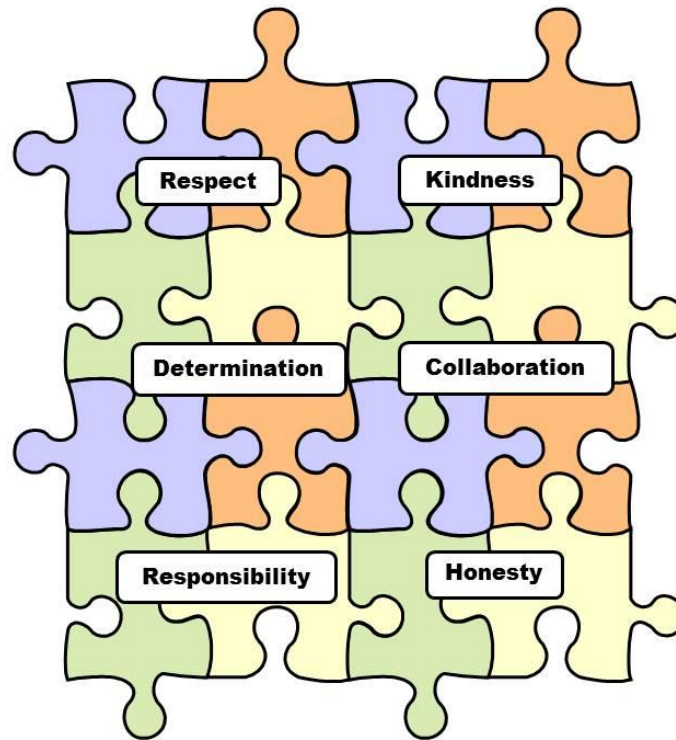
Implementation is the responsibility of all staff and will be overseen and monitored by the assessment leader, curriculum subject leader and the Headteacher.

*Maths statement of intent:* It is our intention, to secure the necessary mathematics skills to become enthusiastic and independent learners. We strive to ensure all our children receive a sequential learning experience, which will equip them with the essential tools to achieve at Widney Junior School and beyond. It is our intention to immerse children in the wonders of reasoning and problem solving to ensure all children can spot patterns and use the maths in real life contexts and we aim to foster a love for maths.

Maths underpins the work undertaken in other areas of the curriculum and is essential for educational and social progress. Through our teaching of maths, we aim to create valuable, contributing members of society. Our vision is to ensure that every child achieves their full potential in all aspects of Maths curriculum to become confident mathematicians.

### Our school values

Through discussion by all members of the community including parents, children, teachers and governors, we hold the following values at the heart of our school.



*These core values are held by our school and underpin all aspects of the taught curriculum at Widney.*

### *Challenging Stereotypes- inclusion and diversity.*

*Widney is committed to challenging stereotypes in all aspects of school life. This may be on grounds of race, sexual orientation, faith or gender. Widney is proud to be an active Stonewall school and all staff are expected to work within these guidelines. Within the curriculum for this subject, consideration will be given at the planning stages by the subject leader and the class teacher to promoting diversity in its broadest sense. Opportunities will be given for pupils to reflect, discuss and share opinions within the context of our whole school values. All adults in school have the responsibility to challenge attitudes or actions which may discriminate or be deemed as being derogatory towards another group. We endeavour that our pupils and community show respect, tolerance and empathy in order for them to be responsible members of modern British society.*

## Maths at Widney

All children and young people at Widney Junior School have the opportunity to experience the fun and enjoyment of learning mathematics, sometimes practically, during lively and engaging lessons which are focused and planned to meet the needs of all learners. Pupils participate in mathematical enquiry and investigation, experiencing the awe and wonder of pattern, connections and relationships and solving problems for the first time. Pupils develop the mathematical knowledge and understanding required to enable them to become competent mathematicians using a range of skills to solve problems inside and outside of the classroom environment and across a variety of subjects. They have the opportunity to become proficient in calculating, using a range of mental and written strategies whilst developing a flexible and fluent approach to working with numbers. Pupils are challenged to think mathematically and engage in rich mathematical discussion using appropriate vocabulary to explain their reasoning and ideas concisely. In addition, pupils recognise the importance of mathematics in developing themselves as financially capable citizens and value mathematics as a subject rooted in business and industry, providing the purpose and motivation for engaging with, and learning about, mathematics throughout their time in education.

## Intent

At Widney we aim:

- To create a lively, stimulating and happy environment where individuals achieve the highest standards.
- To provide a broad, balanced and challenging curriculum that helps children to become fluent in the fundamentals of Mathematics.
- To stimulate pupils' mathematical curiosity in the world around them and allowing children to apply mathematical ideas to real-life problems and situations.
- To encourage pupils to work co-operatively, collaboratively and communicate their ideas to others in a variety of forms.
- To develop strategies for self-evaluation and to motivate all to strive for excellence.
- To develop Mathematical strategies and skills across the curriculum.

All children should:

- Ask questions
- Make predictions
- Carry out mathematical investigations
- Interpret results and findings
- Develop accuracy in measurement
- Develop skills in collecting and recording data
- Develop oral/written skills
- Develop skills in communicating ideas to others
- Encourage the correct use of mathematical vocabulary
- Explore reasoning and problem solving strategies

A maths classroom at Widney must have:

- Access to appropriate resources.
- Enticing classroom displays of work with key vocabulary.
- Working wall displays. (Excellent practice would show modelled example work)
- Examples of written work, research, ICT processed work, cross curricular work wherever possible.
- Maths across the curriculum lessons taught at least 5 times per term.

### Planning

It is the responsibility of the Maths Leader to ensure that each teacher is provided with long term modular planning and is given guidance and support necessary for them to write weekly short term plans.

A long term plan has been created by Maths SL in collaboration with year group teachers and SLT to ensure progression of provision in line with the National Curriculum.

White Rose, Bright Pi, Collins Busy Ant Maths, HeadStart, Diving For Mastery, Classroom Secrets and a range of other mathematical resources are available to help teachers to plan and create engaging lessons for all pupils.

Copies of short term plans/ detailed Smart Board presentations are saved centrally each week and the Subject Leader monitors the content of these in respect to their subject. Planning is monitored half-termly by the Subject Leader to ensure standard in Mathematics are maintained and promoted.

The expectation is that the majority of pupils will move through the programmes of study at broadly the same pace. However, decisions about when to progress should always be based on the security of pupils' understanding and their readiness to progress to the next stage. Pupils who grasp concepts rapidly should be challenged through being offered rich and sophisticated problems before any acceleration through new content. Those who are not sufficiently fluent with earlier material should consolidate their understanding, including through additional practice, before moving on. The class teacher is responsible for the effective planning and delivery of the learning objectives, monitoring the progress of all learners and directing the appropriate support of any additional adults in the classroom. If children are not in line to achieve expected progress or are working below the expectations for their age, they should be prioritised for additional intervention. It may be necessary, in the case of a very small proportion of pupils, to include objectives from a previous or subsequent year according to the ability of the pupils. When selecting objectives, it is important that topics are taught in depth and that children have a breadth of knowledge in a particular subject area.

At Widney, a fluid curriculum means that if a teacher feels it necessary to recap an area of maths the majority of pupils found challenging, then this can be done.

### Strategies for the teaching of maths

We use a variety of teaching and learning styles in mathematics, including direct teaching, modelling, enquiry, consolidation and application. Children are presented with opportunities to be experimental, creative and co-operative, and to face challenges as individuals as well as in small groups or as a whole class. They have the opportunity to use a wide range of resources and practical equipment relating to all areas of the mathematics curriculum.

### Structure of Maths Lessons at Widney

In Years 3 - 6, all pupils will receive daily maths lessons that are planned as part of a continuous sequence of learning with each lesson organised so that it is fit for purpose to ensure maximum

learning can take place. The structure of the mathematics lesson is entirely flexible and will be adapted to best suit the children and the context of the work. Throughout the whole of the lesson, teachers will use a range of questioning techniques to develop pupils' mathematical thinking and to encourage the full and active participation of all pupils. Activities will be planned, resourced and quality first taught to meet the needs of all learners in the class. Where pupils need significant additional support, intervention groups are arranged to enable pupils to make rapid progress.

Teachers are expected to include a times table and reasoning/problem solving focus throughout each week and to provide opportunities for children to apply their skills to open ended investigative work. The lesson time may include a combination of:

- A whole class teaching activity, often including a mental/oral starter
- Guided/ independent activities with the teacher working with a specified focus group- identified on short term planning.
- Plenary.

At Widney, there should always be flexibility in order to meet the needs of all pupils and their varying rates of progress. Also, lessons can be flexible to offer creativity in planning and delivery.

### Teaching times tables - 'Total Recall'

Effective understanding and recall of times tables is the foundation of most of the maths that children will do at school and the curriculum puts a massive emphasis on knowing them early. Here at Widney, we use the following badge reward system:

- Blue Badge - Number bonds to 10
- Pink Badge - Number bonds to 20
- Light Blue Badge - Number bonds to 100
- Purple Badge - Doubling/Halving to 20
- Red Badge -  $2x$ ,  $5x$ ,  $10x$
- Yellow Badge -  $3x$ ,  $6x$ ,  $4x$ ,  $8x$
- Green Badge -  $7x$ ,  $9x$ ,  $11x$
- Black Badge - Total recall of all times tables, including  $12x$
- Bronze Badge - Applying times tables to worded problems.
- Silver Badge - Division table facts.
- Gold Badge - Applying division facts to worded problems.

- White Badge - Multiplying and dividing whole and decimal numbers by 10, 50, 100, 1000.

In order to help children understand that multiplication and division represents real-life situations, they are asked to apply their times tables and division related facts to worded problems.

As well as practicing in class, children will have time to practice during afternoon registration in order to prepare for their badge tests which will happen when the child feels that they are ready to take the test. Children who have received a badge every half term will be asked to stand up and be recognised as part of Celebration Assembly. When the next badge is received, the child will 'trade in their old badge'.

### Teaching times tables - 'Times Table Rockstars'

In addition to total recall, pupils are invited to play on TT Rockstars both within school time (on computers / iPads) and at home as additional homework. Teachers will monitor and assess pupil's understanding of rapid recall of times table facts through the 'Stats' dashboard and target as appropriate.

Subject lead will monitor half termly and assess any classes falling behind and any children who deserve specific praise (classes or individual based upon the % of players, % of accuracy improvement, % of speed improvement etc). Subject lead then feeds back during celebration assembly winners of each of the below categories:

Best class- active players:

Best class- accuracy:

Best class - average speed:

Most improved time:

Most improved accuracy:

### Teaching times tables - Monitoring:

Each pupil will complete a times table test half termly (in line with the Y4 MTC) and the SL will track pupil's progress and feedback to whole/individual staff as appropriate. This will then feed in to booster time, targeting and possible interventions.

Year 4 will undertake additional practice in readiness for the Y4 MTC.

### ICT and Mathematics

ICT is an integral part of learning at Widney. Teachers regularly use Smart Board to assist in and reinforce their teaching. All children have opportunities to use ICT including CD ROM's, cameras, spreadsheets, databases and word processing.

ICT is incorporated into specific parts of the daily mathematics lesson as appropriate. During the mental oral part of the lesson, ICT is used to provide a starting point for exploring number patterns; experimenting with properties of shape etc. During the main teaching part of the lesson, ICT is used as a teaching tool to enable pupils to learn effectively. Classes have opportunities to participate in Mathematics lessons in the computer suite or to use Netbooks where particular programs are used to consolidate number skills; explore patterns in data; compare measures of distance, angle and time; and reinforce the correct use of mathematical language.

Calculators are used for a range of purposes depending on the age of the pupils:

- Pupils in lower KS2 are introduced to calculators and the patterns generated by them
- Pupils in upper KS2 are taught the basic functions of a calculator
- Calculators are not used for basic calculation where a mental or written method is more appropriate but as a resource to check work or to perform calculations that are part of a larger problem.

TT Rockstars is available to all pupils online or via the TT Rockstars App available on all android devices. As appropriate, pupils will be given practice time with iPads / computers in readiness for the Year 4 Multiplication Check.

Purple Mash is used in computing lessons and has a range of maths activities online. Teachers can use these if deemed appropriate during lessons.

Maths Shed is available to all pupils online via the Maths Shed App available on all android devices. As appropriate, pupils will be given practice time with iPads / computers to promote enjoyment of mathematics.

## Teaching Maths to Children with Special Needs

At Widney, teachers will plan inclusive lessons so that all pupils, including those with SEND, are able to access them, wherever possible. Teachers will create an inclusive learning environment through the effective deployment of additional adults and carefully planned resources. Strategies will be employed to scaffold learning, where necessary, by providing reasonable adjustments.

In accordance with the Special Educational Needs Code of Practice we recognise that: "A child has special educational needs if he or she has a learning difficulty which calls for special educational provision to be made for him or her". By special educational provision we mean "educational provision which is additional to, or otherwise different from, the educational provision made generally for children of their age in schools maintained by the LEA other than special schools in the area".

### Section 312 Education Act 1996

A person has a disability if he/she has a physical or mental impairment, which has a substantial and long-term adverse effect on his ability to carry out normal day-to-day activities.

### Section 1 (1) Disability Discrimination Act 2001

Children have a learning difficulty if they:

- Have a significantly greater difficulty in learning than the majority of children of the same age
- Have a disability, which prevents or hinders them from making use of educational facilities of a kind generally provided for children of the same age in schools within the area of the local education authority.

In order to achieve these aims, the staff at Widney will:

- Ensure that all pupils with Special Educational Needs have their needs identified and met.
- Make effective provision to ensure their inclusion. (See provision map)
- Give all children with Special Educational Needs access to a broad, balanced and relevant curriculum.
- Ensure that the progress of all children with Special Educational Needs is carefully monitored.
- Recognise all children as individuals with individual strengths and weaknesses to be supported

- Develop confidence and self-esteem so that all pupils value themselves
- Involve parents, in partnership, in the education of their children
- Ensure pupil's participation in having responsibility for their learning
- Request advice from outside agencies as appropriate
- IEP's must be written in collaboration with the SENCO and the class teacher. All IEP's should be reviewed throughout the year with the class teacher and the SENCO and new SMART targets set.

All staff are involved with the development of the school's SEN policy and are aware of the school's procedures for the identification, assessing and monitoring of children on the SEN Register.

### Intervention Programmes

\*Child identified from assessment procedures/ consultation with class teacher/ SENCO.

\*Catch up programme modified for children who are above the SEN stage but are at risk of under achieving delivered by TA/ SENCO

\* Assessment ongoing throughout intervention programmes.

\*Children assessed formatively every half term to plan next steps for their learning.

### Most able

These pupils can be identified by the class teacher or Maths lead for the school. Their progress and attainment will be monitored termly using 'O Track'. Teachers plan for these pupils to use and apply their skills in wider contexts and often give them the choice of how to present work.

### O Track assessments

At the end of every half term, teachers need to input summative judgements based on formative assessment and the Headstart assessment for Mathematics. There are these judgements:

W1 - Working towards.

W2 - Working towards.

W3 - Working towards.

A - Achieved the National standard.

M - Mastering the National standard.

If a child is working at a lower stage than the one they're in, they will be assessed as above but will have the year group strand before the judgement. (For example: 2W2 - Year 2 working towards).

The school's expectation is that the majority of each class (around 85% of pupils) will achieve the national standard at the end of each year.

### Assessment of Maths

Teachers at Widney are expected to use their Teacher Assessment, drawing from a range of sources, pieces of work and observations to make sound level judgements against a child's progress. All children are assessed daily through teacher observations and more formally when analysing pupils' written work. Termly, pupils will undertake summative assessments which are then combined with teacher judgement to assess pupils' attainment and progress which is recorded on O Track.

### Monitoring and CPD

Termly book scrutinies are carried out with clear foci. The Maths Lead uses lesson observation feedback and scrutinies of pupil's books to ensure progress and learning are meeting the needs of all learners. Pupil interviews about reading and writing are conducted to provide feedback on the quality of both teaching and learning and as a means to set higher standards. Curriculum teams/SLT may monitor clearly identified aspects relating to the school improvement plan and feed this back to staff/ co-ordinator. Any areas for development are identified (either by the member of staff or through monitoring) and are addressed with appropriate CPD (e.g. working with a specialist, INSET/course training, which then can be feedback to the rest of the staff if needed).

### Targets

On-going use of O Track formative assessment will highlight areas for development, therefore providing individual targets for pupils. These are printed termly and kept in the child's Assertive Mentoring File.

### Self/ peer assessment by pupils

As appropriate, pupils may self assess against the Lesson Endpoint using a smiley face system.

### Resources

Maths is planned within a year group to enable the sharing of ideas and resources. There are a wide range of resources that teachers can draw on including, but not exclusively: Busy Ant Maths, Collins Maths, White Rose Maths, Classroom Secrets Maths, Head Start Maths, NRich Maths. Teachers choose appropriate activities to fit the needs of their learners based upon prior attainment and level of understanding. The children are taught within their mixed ability class.

### Link Governor

A link governor liaises with the Maths lead every term to ensure standards are being met.

### At Widney, the Maths Leader:

- Ensures that pupil's maths is a high priority for staff, parents, governors and learners alike.
- Defines clearly staff roles and responsibilities including TA's responsible for "Third Space" learning.
- Ensures that all teaching staff have access to quality resources and guideline materials to implement the national curriculum strands.
- Manages the budget
- Monitors the quality of learning and teaching across the school through thorough tracking of pupil progress in Maths.
- Liaises with Assessment Leader to provide teaching staff/ SENCO with information regarding target group teaching based upon the analysis of internal tracking information.
- Reviews the implementation of Maths periodically.
- Ensures that children are provided with opportunities to make rich connections across mathematical ideas to develop fluency, mathematical reasoning and competence in solving increasingly sophisticated problems.

### Presentation and Marking

(See school policy)

Feedback to pupils about progress is achieved through effective marking. This assists pupil's learning and comments should aim to be positive and constructive. Marking and feedback should be against the lesson endpoint which is set out clearly at the start of every piece of work. Suggestions should be included where appropriate for progression. Children in the upper and lower school should be

encouraged to self-assess their work. This may involve peer marking with constructive comments written by a peer marker and verified by the teacher.

Children are expected to take care with the presentation of their written work. When working on squared paper, children will be encouraged to write one digit in each square. Diagrams, graphs and tables should be drawn in pencil, straight lines drawn with a ruler. Children are encouraged to produce informal jottings and drawing as appropriate, to support their mathematical thinking.

### Homework

To consolidate pupils' learning, homework will be set once per week. This could include a Century assignment, TT Rockstars tasks, investigations or calculation practice.

We recognise the importance of making links between home and school and encourage parental involvement. Parents are encouraged to show an interest in their pupils' homework and assist where necessary.

### Health & Safety

It is expected that all resources are handled safely and stored correctly.

### Spiritual, Moral, Social and Cultural (SMSC) aspects

Maths promotes the spiritual, moral, social and cultural development in each individual. All pupils are encouraged to develop their own skills and understanding to work as an individual or in a group or class situation, responding to others in an appropriate manner.

The breadth and balance of experiences at Widney embraces many aspects of the PSHE curriculum through exploration of the real world and using imagination and creativity. We aim to invite in visitors such as Maths Magicians to enhance the curriculum at Widney. SMSC is also celebrated during celebration weeks.

### Monitoring and Review of Policy

This will be carried out by the Maths Leader, Head-teacher, members of the Governors' group. This will be included as good practice as part of the SIP (School Improvement Plan).

This policy will be reviewed in September 2026.