

Winwick CE Primary School



## Mathematics Policy

*In God's love, aspire and achieve to be the best'*

1 Corinthians 16:14 'Do everything in love.'

This policy outlines how mathematics at Winwick CE Primary School is planned, taught, learned and assessed. Each element has been discussed and agreed by all teaching staff and reflects the ethos of high expectations and drive for the highest standards which underpins all aspects of teaching and learning at our school.

### **Maths Rationale**

Mathematics equips pupils with a uniquely powerful set of tools to understand and change the world. These tools include logical reasoning, problem solving skills and the ability to think in abstract ways. It enables children to understand relationships and patterns in both number and space in the world around them. Through their growing knowledge and understanding, children learn to appreciate the contribution made by many cultures to the development and application of mathematics. It is integral to all aspects of life and with this in mind we endeavour to ensure that children develop a positive and enthusiastic attitude towards mathematics that will stay with them.

At Winwick CE Primary School we use the National Curriculum for Mathematics (2014) as the basis of our mathematics programme. We are committed to ensuring that all pupils achieve mastery in the key concepts of mathematics, appropriate for their age group, in order that they make genuine progress and avoid gaps in their understanding that provide barriers to learning as they move through education. Assessment for Learning, an emphasis on investigation, problem solving, the development of mathematical thinking and development of teacher subject knowledge are therefore essential components of our approach to this subject.

### **Aims**

The aim of teaching mathematics is based on **three** key principles:

- To **become fluent** in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils develop conceptual understand and the ability to recall and apply their knowledge.
- To **reason mathematically** by following a line of enquiry, building relationships, developing an argument and using mathematical language.
- To **solve problems** by applying their mathematics to a variety of routine and non-routine problems with increasingly confidence, including breaking down problems into a series of simpler steps and persevering in seeking solutions.

### **Teaching and learning style**

At Winwick CE Primary School, we are committed to providing exciting and challenging learning experiences for all of our children. Throughout the school, a range of teaching styles are adopted to ensure lessons motivate and inspire our children to want to learn more. We develop their ability to independently select and use appropriate concrete apparatus to support their conceptual understanding and build procedural fluency in line with the calculation policy. They are encouraged to access and use a wide range of resources, such as bead frames, bead strings, number lines, Dienes/ Base 10 apparatus, place value counters, Numicon, multilink, place value cards, Cuisenaire rods and other small apparatus to explain mathematical concepts. We develop the children's ability to represent problems using visualisation skills, jottings and pictorial representations including their own ideas. ICT is used in mathematics lessons for modelling ideas and methods.

The highest standards of planning, preparation and assessment, paying particular attention to individual need, are expected from staff. It is also expected that staff mark work in line with the marking policy, evaluate lessons and use data appropriately to track and monitor progress and inform future planning. Pupils are given the opportunity to respond to marking.

### **Inclusion**

It is the right of every child at our school to be provided with a meaningful and enjoyable education regardless of gender, ethnicity, disability or special need. Staff will always ensure that every effort possible is made to support or challenge children with specific needs in an environment where every child is equal. Pupils who grasp concepts rapidly will be challenged through depth of understanding and not be accelerated through new content. Those who are not sufficiently fluent with earlier material will consolidate their understanding, including through additional practice, before moving on. We achieve this through pre and post assessment.

### **Guidance on mathematics planning**

The National Curriculum 2014 has six main areas of study:

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

Teachers use the NCETM resources, Classroom Secret, White Rose Materials and Maths No Problems to support the development of maths mastery. Teachers plan on a weekly basis.

### **Environment**

All classrooms will have a maths 'working wall'. This will be regularly updated and reflect current maths learning and vocabulary. It can also display age appropriate resources to support children's learning such as deans, fraction walls etc. All maths equipment will be clearly labelled and children encouraged to have regular access to concrete resources.

### **Early Years Foundation Stage**

We teach mathematics in our Foundation Stage where we relate the mathematical aspects of the children's work to the objectives set out in the Early Learning Goals, which underpin the curriculum planning for children during the Early Years Foundation Stage. We give all the children ample opportunity to develop their understanding of number, measurement, pattern, shape and space, through varied activities that allow them to enjoy, explore, practise and talk confidently about mathematics.

### **Presentation of Maths Work**

Each lesson must include the short date (e.g. 03.09.19) on the left-hand side of the page with the WALT written underneath. Both must be underlined with a ruler. Children are encouraged to present their written calculations in pencil as neatly as possible by putting one digit in a square. A ruler must be used for drawing straight lines. The emphasis of neatly produced work is important as poor presentation and careless setting out can lead to incorrect calculations.

### **Assessment**

"...'assessment' refers to all those activities undertaken by teachers, and by their students in assessing themselves, which provide information to be used as feedback to modify the teaching and learning activities in which they are engaged."

At Winwick CE Primary School, we view assessment as having two main purposes:

- assessment of learning (also known as summative assessment)
- assessment for learning (also known as formative assessment).

#### **Assessment for learning (AfL) - formative assessment**

*"Assessment for learning is the process of seeking and interpreting evidence for use by learners and their teachers to decide where the learners are in their learning, where they need to go and how best to get there."*

©Assessment Reform Group, 2002

AfL is any assessment activity that informs the next steps to learning. The key message is that AfL depends crucially on actually using the information gained. Our belief is that by creating a 2-way process of discussion, evaluation/review we create an environment where all learners have the confidence that they will improve.

Pupils will be encouraged to peer mark, whenever relevant, and time will always be given to respond to improvements (fix it time).

### Formative assessment in the Foundation stage

The Foundation stage team uses a formative assessment to aid their planning, support all children and make sure that they all achieve to the best of their abilities. The Foundation stage team engages in formative assessment by taking photographs, by doing spot observations on post-its and by doing planned assessments.

Children's work is marked when appropriate, from their teachers' planning is informed and individual need can be addressed e.g. support or additional challenge. Planning is annotated using evaluation sheets. Teachers indicate whether objectives have been understood, whether concepts have been delivered but not grasped or partly grasped. This provides a monitoring tool for planning and pupil progress. Specific pupil's names are used in evaluations to aid planning for individual needs.

### Assessment of learning (AoL) - summative assessment

We make termly summative judgements of each child's achievement using development matters stages of development.

Some of the evidence base for these assessments may come from day-to-day class work, this is backed up by evidence that comes from specific tasks and tests used to assess the degree of retention, independence and breadth of application shown. We use these judgements to assess progress and achievement against individual, school and national targets. We identify and target those children not making expected progress and intervene accordingly.

Assessment is tracked at least termly using the school's tracking system and pupils' progress is discussed in Pupil Progress Meetings. Children who haven't made progress are discussed and made note of so that they become a focus in teacher's planning for the next term. We pass all assessment and tracking information on to the next teacher at the end of the year, so that s/he can plan for the new school year.

We give parents termly updates alongside the opportunity to discuss their child's progress and attainment at a teacher/parent meeting. We also write a summary of each child's progress and achievement in the Annual Report for parents.

### Summative assessment in the Foundation stage

In the Foundation Stage we formally assess the children at the end of each term. The EYFS teacher assesses the children using a profile which is based on the National Foundation stage

profile and Early Learning Goals. The teacher uses evidence found in photographs, observations and children's work to aid their assessment. This assessment provides data which can be used by the teacher to inform planning and give feedback to children on their goals and how they can achieve them. At the end of the Foundation Stage the data from the Foundation Stage Profile is analysed by the class teacher providing evidence to monitor pupil progress, celebrate successes and highlight gaps in understanding or performance.

At the end of the Foundation Stage data is collected and recorded onto SIMS stating whether the children are emerging, expected or exceeding the Early Learning Goals.

### Parents

At Winwick CE Primary School, we recognise the vital role which parents and carers play in the education and development of their children. As a school with adopt an 'open door policy', parents are encouraged to come and talk to staff after or before school about their child's progress, their goals and how they can support their child in reaching them. Individual progress is also discussed at Parents' evenings. Homework is given to children as appropriate to their needs and which develops their learning. See Homework policy.

### **The role of the Senior Leadership Team**

#### **The Head teacher will:**

- Provide support by encouraging staff and praising good practice
- Monitor learning and teaching
- Give feedback to teachers
- Support staff development through CPD

#### **Other senior leaders will:**

- Provide a strategic lead and direction for Mathematics in the school
- Provide support and advice to staff in the delivery of the Mathematics programme of study
- Remain informed about current developments in the subject by attending network meetings
- Monitor and evaluate teaching and learning of Mathematics
- Monitor standards in the subject
- Monitor planning and books and interview children
- Order and maintain resources to enhance effectiveness of Mathematics teaching within the school
- Work with SLT members in the evaluation and planning of actions included within the School Development Plan.
- Regularly meet with staff
- Present regular updates to Governors

#### **The Class teacher will:**

- Be responsible for the teaching of Mathematics as set out in the policy.
- Provide samples of mathematics work to the Mathematics leader when required
- Assess children's work in order to detail future planning
- Be responsible for marking books
- Be responsible for the progress of children
- Use data to track and monitor progress and to inform planning
- Use working walls to support children in their learning

