

OUR INTENT, VISION AND ETHOS

At the heart of our learning at Ordsall Primary School is the ancient proverb I **hear** things, and I **forget** them. I **see** things, and I **remember** them. I **do** things, and I **understand** them.

This ancient proverb is demonstrated no more clearly than in the words that define our school - **Play, Learn and Grow Together**. It is our aim that, by focussing on each key part, **all** learners at Ordsall Primary will achieve their full potential and many will achieve beyond what is expected through:

By Playing Together they will....

Develop curiosity of mind and spirit

Create, explore and discover

Adapt and cooperate

Learn, practice and master skills AND

Achieve and Aspire to be the “best that they can be”

By Learning Together they will.....

Experience wider opportunities beyond the school

Develop essential skills, knowledge and understanding

Build character, resilience, confidence and independence

Communicate and collaborate as part of a team

Apply learning across a broad, balanced, rich and exciting curriculum AND

Achieve and Aspire to be the “best that they can be”

By Growing Together they will.....

Know that we all have the same rights and needs

Develop integrity and an understanding of what is right and wrong

Develop tolerance and acceptance of **people's individual characteristics**

Inspire others and celebrate every achievement

Work together, in partnership, as a wider community of learners AND

Achieve and Aspire to be the “best that they can be”

In addition we strive to develop and uphold the Fundamental British Values of:

- Democracy
- Rule of Law
- Individual Liberty and tolerance of those of different faiths
- Developing personal and social responsibility
- Respect for British Institutions

Safeguarding Statement

At Ordsall Primary School we respect and value all children and are committed to providing a caring, friendly and safe environment for all our pupils so they can learn, in a relaxed and secure atmosphere. We believe every pupil should be able to participate in all school activities in an enjoyable and safe environment and be protected from harm. This is the responsibility of every adult employed by, or invited to deliver services at Ordsall Primary School. We recognise our responsibility to safeguard all who access school and promote the welfare of all our pupils by protecting them from physical, sexual and emotional abuse, neglect and bullying.

Maths Policy

Vision statement

Play, Learn and Grow Together is demonstrated within our maths curriculum throughout school. **We play** by planning opportunities for child initiated play and adult led activities in Foundation stage and Lower KS1. Children are immersed in number and other maths concepts from an early age through outdoor play, apparatus and equipment. As their maths journey continues throughout school the children are encouraged to explore and investigate maths concepts using a variety of resources and representations. **We learn** by developing essential skills, knowledge and understanding which underpins mathematical concepts. We communicate and work together to help build character and resilience which in turn helps to develop confidence and independence. We understand that making mistakes is a vital part of the learning process. The skills acquired are then applied across other areas of the curriculum. **We grow** by listening which helps us to develop tolerance and acceptance of the ideas and opinions of others. We work together in partnership with the wider community to support projects and promote opportunities to help others, such as fundraising events and enterprise.

At Ordsall Primary School we strongly believe that Maths is a significant life skill that is essential to participate fully as a member of society. Mathematics teaches children how to make sense of the world around them through developing an ability to be fluent in mathematical facts, to reason and to solve problems. It enables children to understand and appreciate relationships and pattern in both number and space in their everyday lives. We aim to develop the abilities of all children in our school through maths concepts, developing reasoning, fluency and problem solving.

Aims

- To encourage all students to engage in the mathematics curriculum
- To promote enjoyment of learning through a combination of practical activity, exploration and discussion
- To promote confident engagement and competence with numbers and the number system
- To develop the ability to solve problems through decision-making and reasoning in a range of contexts
- To develop a practical understanding of the ways in which information is gathered and presented
- To explore features of shape and space, and develop measuring skills in a range of contexts.
- To understand the importance of mathematics in everyday life.
- Children to take pride in all their work – maintaining high standards
- To respond to marking in a constructive way, taking on board feedback.

Objectives

- To provide opportunities for ALL children to reach their full potential in Maths using pre-teach, triage and appropriate interventions and groupings
- 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 understanding and the ability to recall and apply knowledge rapidly and accurately.
- To **reason** mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language
- To **solve** problems by **applying** 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.

Planning

It is the class teacher who plans the weekly objectives for the teaching of Mathematics. These unit plans list the specific learning objectives and expected outcomes for each lesson, and give details of how the lessons are to be taught, these are informed by the medium term planning.

Weekly timetables include:

- Success Criteria (TBAT) and the opportunity for children to assess their own work as a class or group.
- National Curriculum objectives taken from White Rose Maths Hub schemes of learning.
- Guided Group Maths planned for on a regular basis. (Triage and pre teach).
- A review lesson should be an integral part of the planning process showing prior knowledge at the starting point in the unit of work.
- Fluency, problem solving and reasoning focus.
- Opportunities to practise core skills

Teaching and learning

The school uses a variety of teaching to accommodate learning styles in mathematics. Our principal aim is to develop children's knowledge, skills and understanding. During our daily lessons we encourage children to ask as well as answer mathematical questions. Children will be given the opportunity to engage in fluency, reasoning and problem solving activities to demonstrate their understanding. They have the opportunity to use a wide range of resources, such as number lines, number squares, digit cards and small apparatus to support their work. ICT is used in mathematics lessons to facilitate engagement and support learning. Wherever possible, we encourage the children to apply their learning to everyday situations.

Assessment of Maths

Assessment opportunities are built into the planning of lessons and a range of other methods are used as appropriate. Standards are checked both in school and through external moderation opportunities. These include

- Children's work marked promptly and in accordance with the school marking policy
- Summative standardised tests (SATs) from Y2 to Y6 with statutory tests at the end of Years 2 and 6
- Year 4 times tables check
- Arithmetic test which are recorded by the teacher (Years 4, 5 and 6)
- Planned number fluency sessions taught at least 3 times a week (Foundation to year 3)
- In years 4, 5 and 6 number fluency to be taught as part of whole class teaching and triage.
- Observations of individuals or groups, looking for particular skills or concepts to be demonstrated
(Including photographic evidence of practical tasks and continuous provision)
- White Rose maths end of unit assessments to be completed after teaching each unit.
(Displayed in maths books at the end of each unit.)

Marking in Maths

At Ordsall Primary School we have based our marking in mathematics on Marking and Evidence Guidance for Primary Mathematics Teaching published by the National Centre of Excellence for the Teaching of Mathematics (NCETM) in April 2016. Most marking in maths will be 'light marking' and take place during and after the lesson. There is an expectation that the child will go back and correct mistakes in arithmetic work.

Research (Black et al 2003) shows that the most effective and beneficial forms of marking, feedback and assessment are ones which support learning (i.e. are formative) and are built-in to lesson design. In primary mathematics they require:

- well-structured classroom activities (involving conceptual and procedural variation and intelligent practice);
- regular opportunities for discussion of answers and strategies to support pupils' reasoning skills and check and deepen their understanding;
- Interaction and dialogue (between teacher and pupils, and between pupils themselves), focusing in particular on key ideas and concepts (including misconceptions and difficult points) and effective, efficient strategies of working mathematically.

It is important for teachers at Ordsall Primary School to distinguish between a pupil's simple slip and an error that reflects a lack of understanding. In order to do this feedback in mathematics is to be done in line with the schools agreed practice and procedure. See appendix Marking of Mathematics.

Target setting

Teachers set half termly individualised targets for each child which allow children to focus on a key concept identified as posing a problem to the individual.

Teaching and promoting British Values

Within Mathematics, British values are promoted and explored in a variety of ways. As a school we encourage pupils to respect the views of individuals and provide a learning environment in which everyone feels able to express themselves freely yet respectfully. Values such as respect, tolerance of other opinions and positive criticism are embedded in Mathematics. An underpinning drive to children who are resilient, respectful, determined and respectful in Mathematics creates a positive set of values to apply to all areas of life.

British Value	How is it taught?
Democracy	Pupils are always listened to carefully by the adults in school and are taught to listen carefully and with concern to each other, respecting the right of every individual to have their opinions and voices heard. We encourage pupils to take ownership of their own learning and progress through targets. As part of our maths curriculum children across school will use statistics to justify arguments and will learn to interpret and analyse data.
Rule of Law	As in all aspects of our contextualised learning, the children are taught that maths involves rules. The children are taught rules when using formal written calculations and procedures when answering certain questions. These are all embedded with the classroom through steps to success and working walls.
Tolerance of Religions and Beliefs	Values such as respect, tolerance of other opinions and positive criticism are embedded in Maths. An underpinning drive to develop pupils who are resilient, respectful, determined and respectful creates a positive set of values to apply to all areas of life and help develop children's character. The white Rose mathematics curriculum promotes the British values of tolerance and resilience on a daily basis through problem solving and understanding of complex concepts, encouraging all children to persevere and try different methods to arrive at the correct solution. Pupils are encouraged to build on and learn from their mistakes in maths lessons.
Mutual Respect	Our pupils know and understand that it is expected that respect is shown to everyone and to everything, whatever differences we may have. Children learn that their behaviour choices have an effect on their own rights and those of others. All pupils are encouraged to

	treat each other with respect. We work together to solve mathematical problems and we provide constructive feedback to our peers to support learning. During our maths lessons we are able to make mistakes and learn from them, in a safe learning environment.
Individual Liberty	Alongside rules and laws, we promote freedom of choice and the right to respectfully express views and beliefs. We make our own choices and understand the rewards for or consequences of our own actions. We take ownership of our own learning and responsibility for consolidating the work we do during lessons. We do this by independently using reflect Ed to self-assess our work at the beginning and the end.

Developing Cultural Capital

At Ordsall Primary School we recognise that for pupils to aspire and be successful academically and in the wider areas of their lives, they need to be given rich and sustained opportunities to develop their cultural capital. In mathematics we seek to develop their Cultural Capital through providing knowledge and understanding of financial and money matters, teaching pupils explicitly about such things as negative and positive numbers and the place value of money. Through our Christmas enterprise fayre we encourage the children to plan and budget thinking about the customer and end product. Through work on representing and analysing data pupils begin to think critically about information that is presented to them as well being exposed to situations where data may be misleading. The history of mathematics is explored which demonstrates the universal nature of the subject and the notion that different cultures have, at different times, been at the forefront of development in the subject in particular when discussing Roman numerals. Our children are encouraged within maths lessons to develop their personal and future employability skills by showing a growth mind set and Resilience when approaching reasoning and problem solving activities.

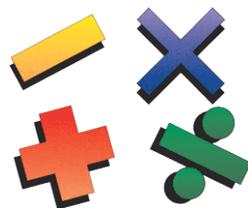
Monitoring

Half-termly maths books for a class in each phase will be checked against the Non Negotiables. More detailed moderation and book scrutinies will take place on a termly basis.

Maths Marking and Feedback

Make sure you write the TBAT clearly at the top of the page and underline it neatly with a ruler.

- ✓ Your work will be marked with a tick if it is correct and a dot if it is incorrect.
- ✓ We will use a **blue** highlighter to identify where you may have gone wrong. Any corrections should be done in **purple pen**.
- ✓ We will write an 'A' next to the TBAT to show how you have achieved the objective.
- ✓ If we highlight the 'A' in **green** (3 ticks), we will give you a challenge to complete.
- ✓ If we highlight the 'A' in **yellow** (2 ticks), you will need to look at your work again and do any corrections.
- ✓ If we highlight the 'A' in **pink** (1 tick), we will look at this area again together or in small groups.



Appendix

Non Negotiables in Maths for Staff



Play, Learn and Grow...Together!

- Short date – underlined
- TBAT underlined
- Any sticking in should be appropriate and purposeful
- Sheets should be cut to the correct size and titled/ dated appropriately
- Encourage children to take pride in their work and select appropriate equipment e.g. ruler, protractor, sharp pencil etc
- Resources used should be age appropriate and reflect the children’s stage within the calculation policy
- Classroom displays to include the following; symbols, images, vocabulary/Stem sentences, steps for success and focus for the current unit of work.
- Planning should incorporate reasoning and mastery type questions this should be reflected in the children’s books.

Marking

- Highlighting with a **blue highlighter** where a procedural error or slip has occurred e.g. it could be a calculation error so highlight the number that caused it **OR** highlight the word from the question that may have caused the problem.
At the end of the mathematics learning the teacher will mark the TBAT using the symbol “A” with:
- **a green highlight** through it with **3** ticks next to it (indicates that all answers are correct without any support)
- **a yellow highlight** through it with **2** ticks next to it (indicates little blue highlighting and minimal adult support)
- **a pink highlight** through it with **1** tick next to it (indicates serious concerns due to errors and misconceptions)

Where **a child has a green highlighted “A”** and 3 ticks a challenge question is given that extends and deepens the child’s learning.

Where **a child has a yellow highlighted “A”** and 2 ticks the child is given time to correct their errors.

Where **a child has a pink highlighted “A”** and 1 tick it is possibly demonstrating a lack of understanding. As a result the teacher will take alternative courses of action. For instance the teacher may arrange same-day intervention by implementing triage or pre-teach, with a small number of pupils, while for a large number of pupils, the errors will be addressed in the next lesson.

The Professional Associate will also mark work in class using a blue highlighter, but use a symbol of “S” if they have overly assisted a child.