WILDRIDINGS PRIMARY SCHOOL
Mathematics Policy

		Signature	Date
Headteacher	**Mr Simon Cope**		

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Mathematics Policy
Wildridings Primary School

What is Mathematics?

Mathematics teaches us how to make sense of the world around us. It develops children's ability to calculate, to reason logically, to solve problems and to understand and appreciate relationships and patterns in both number and space in their everyday lives. Through this growing knowledge and understanding, children learn to appreciate the contribution made by many cultures to the development and application of maths.

Maths is a creative discipline. It can stimulate moments of pleasure and wonder when a child solves a problem for the first time or discovers hidden connections and solutions.

Vision

At Wildridings, maths is an integral part of our curriculum and is taught using the White Rose small steps of learning to ensure children get a broad and balanced mathematical journey. We aim to promote enjoyment and enthusiasm for learning through practical activity, exploration and discussion. The children start by building confidence and fluency with numbers before moving onto developing skills of problem solving through decision making and reasoning in a range of contexts. By covering a wide range of mathematical topics, we aim to spark the children's natural curiosity and inspire them to delve deeper into mathematical concepts, broadening their understanding. We believe it is important that children are able to connect their mathematical skills with real life experiences and develop perseverance and independence. We encourage the children to work collaboratively and support each other when solving problems and to use a wide range of mathematical vocabulary when discussing their learning. As children move through the school they have the opportunity to revisit learning and refine their mathematical skills, ready for the next stages of their education.

Breadth of Study.

During their time at Wildridings, children will be taught knowledge, skills and understanding in maths through;

- Activities that extend their understanding of the number system to include integers, fractions and decimals.
- Approximating and estimating with increasing accuracy and competence.
- Using patterns and relationships to explore simple algebraic ideas.
- Applying their measuring skills in a range of contexts.
- Collecting and representing data through practical activities and using this data to make conclusions and draw inferences.
- Exploring and using a variety of resources and materials, including computing and calculators.
- Using maths in their work in other subjects.

Time Allocation

Each child will receive 5 dedicated maths lessons per week each lasting for approximately one hour. Mathematical skills will be applied, wherever possible, across other curriculum subjects.

Mathematics Planning

Maths is a core subject in the National Curriculum and we use the 2014 'Milestones' (Government expectations) as the basis for implementing the statutory requirements of the programme of study for maths. Teachers currently use the White Rose Hub materials as a scheme of work. Long term planning for each year group sets out which objectives are covered in different terms, ensuring all objectives are covered throughout the year. Within each unit, there are a set of small steps which help guide planning and split larger objectives into smaller, more manageable chunks. The White Rose planning provides teachers with a range of fluency, problem solving and reasoning questions which can be used and adapted in lessons.

Alongside the White Rose Scheme of work, KS1 teachers use Primary Stars Education planning and resource materials to supplement their lessons.

Using all of these resources, weekly maths plans are created that aim to address the particular requirements of each individual class. Plans list the specific learning objectives for each lesson and give details of how the lessons are to be taught. Activities are differentiated using the terminology of good, better, best. Teacher plans will use ideas and resources from a number of places. These short term plans may be altered by the class teacher throughout the week to ensure the children in the class learn effectively. High expectations are set for every child.

Lesson Format

All teachers plan using the agreed planning format. Each lesson has a set focus taken from the White Rose Planning documents and will include a mix of whole class teaching and small group/independent learning. The lesson will start with a 5 minute fluency based activity e.g. times tables, counting or mental maths. The objectives for these are taken from the year group objectives and will be different each day. There will then be a starter activity. This can be a question/activity linked to previous learning and used as a recap/assessment or will be a new concept which will help the teacher gauge understanding ready for future lessons. There will then be the main teaching. Practical equipment will be used wherever possible to introduce new concepts before moving onto pictorial and abstract representations. Children will carry out an activity linked to the learning objective. There will be 3 levels of challenge and the children will chose their own level wherever possible. There may also be an extension question/activity wherever necessary.

The Teaching of Mathematics.

During these lessons we encourage children to ask as well as answer mathematical questions. To enhance learning and cater for all learning styles we also use a variety of mathematical resources and a variety of models and images to help children visualise and explore mathematical concepts. Wherever possible we encourage children to use and apply their learning in everyday situations. (See Mathematics Calculation policies)

Mathematics in the Early Years Foundation Stage

Nursery and Reception classes follow the new Foundation Stage Framework. Teachers work towards the early learning goals and plan Mathematical Development using the White Rose Hub and Number Blocks resources to ensure mastery and a good transition to Year One. Opportunities to develop mathematical language, number sense, awareness of shape, space, measures and patterns are provided through high quality continuous provision which is then supported through purposeful adult interactions. The learning environment (both indoor and outdoor) is planned for and evaluated throughout the year to meet the current needs of the cohorts. In both year groups mathematical awareness is developed through whole class and key group times looking at daily routines, comparing numbers in a contextual format e.g. how many are away, how many children are left etc. This is further developed with mathematical activities that follow the children's interests in areas of provision (as documented on the Enhanced Provision and Spontaneous Planning documents), through adult interactions and small group activities. In addition to this focused adult-led activities are planned for. In Reception children receive a daily (approx. 15-20 min) adult led class based activity. Depending on the skills and needs of the children as the year progresses children are grouped across the cohort, working in smaller groups on their particular next steps. Objective-led planning linked using our assessments and tracking from Insight details specific next steps for each individual child and all adults use these to guide their interactions or as a basis for more adult –led group work. Progress can be seen on tapestry and through assessments using the non-statutory development matters checkpoints which are on-going throughout the year. In both year groups child focus sheets are also used to monitor children more closely, gain evidence of their current abilities and help teachers plan for their next steps.

Equal Opportunities.

At Wildridings we believe that all children are entitled to equal access to resources, support and time. Maths is mainly taught in mixed ability classes with teachers and LSAs used to support different ability groups within the lesson. Lessons are differentiated with the children being given the choice over which challenge they choose to do. Each week, teachers take a group of pupils for pre teaching, where they introduce the week's objectives and give the pupils time to see the methods before the lessons. Interventions are carefully planned for and delivered to children who need extra support, including post teaching where needed.

Assessment and Recording.

Each child from Years 1 – 6 has a maths book which they use to record all their maths learning. Photographs are taken of practical lessons. From Reception to Year 4 these are uploaded to Tapestry with comments added. Parents can access this from home as well to see what their children have been learning. From Year 5-6 these pictures are stuck in their books and annotated with a description or question. All other maths learning is recorded in their books.

Assessment is regarded as an integral part of teaching and learning and is a continuous process. It is the responsibility of the class teacher to assess all children in their class against the mathematical objectives and in line with the school assessment policy. Teachers use the assessment tool Insight to show whether a child has achieved an objective or not. Children who are working outside of their

year group will have objectives for previous years highlighted. NFER tests are carried out at the end of each term to assess the progress of the children and give them a standardised score. The NFER tests are used alongside teacher judgement to give the children a level at the end of each term.

Displays and Resources

Each classroom has a maths working wall which displays key vocabulary, visual images and models and methods linked to the current maths topic. They are updated regularly to reflect the pace of learning.

Each classroom has a maths trolley with resources in to help support the children. This is easily accessible at all times and children are taught to use the resources whenever they need them. These can be supplemented with additional equipment which is kept in the maths cupboard. Calculation mats are used to help support children through the different written methods used in our calculation policy.

Cross Curricular Links.

At Wildridings we believe that maths does not stand in isolation but that the knowledge, skills and understanding developed in maths lessons are utilised and applied in other curriculum areas including the outdoor environment and real-life situations. Wherever possible, teachers incorporate mathematical activities into foundation subjects so the children can make links and see that maths is used in a variety of subject areas.

Continuous Provision

From Early Years – Year 3 the children have access to continuous and enhanced provision in their classrooms and outdoors areas. This enables them to further develop mathematical skills which have been taught in lessons and embed mathematical skills and concepts. Teachers plan activities which link to the children's learning and give them opportunities to explore maths in different ways.

Parental Involvement and Home Learning.

Parents are kept informed regarding their child's progress in maths through parent –teacher conferences which occur twice a year in the Autumn and Spring terms. The child's progress through the year is also discussed in the end of year reports, which go out in July. If a teacher is concerned about a child at other times, parents may be informed and additional meetings arranged.

In KS2 maths home learning is given as part of the home learning grid, with at least one maths activity set each half term. Children are also encouraged to practise their multiplication tables on a regular basis at home. Each child has access to 'Times Tables Rockstars' and 'Maths Shed' which they can use in school or at home.

The Mental Maths challenge runs from Years 1-6. There are 16 stages for the children to complete from number bonds to 5, through all the times tables facts and up to key mathematical vocabulary. For each stage there are 3 levels of challenge which the children move through before getting their

badge and certificate. They are encouraged to practise each stage at home before being tested in school.

Role of Mathematics Leader.

The subject leader in Mathematics provides professional leadership and management for the subject to secure high quality teaching, effective use of resources and improved standards of learning and achievement for all pupils. To do this he/she will:

- Have knowledge and understanding of the subject and its role in the school.
- Lead professional development of the subject through example and support.
- Develop and implement policies and schemes of work.
- Ensure continuity, development and progression of teaching and learning methods by;
    - Working alongside teachers
    - Monitoring teaching and learning through lesson observations.
    - Collecting and analysing work completed throughout the school.
    - Maintaining and developing resources.
    - Monitoring planning and supporting staff with their plans.
    - Reviewing progress with SLT and governors.