Middle Woodford, Salisbury
01722 782361

Woodford Valley C.E Primary Academy

Towards Christian Life Learning and Love

DIOCESE OF SALISBURY

www.woodfordvalley.wilts.sch.uk

Signed C.M. Knight

Date 12/5/21

Review May 2023

Woodford C.E. (VA) Primary Academy
Mathematics Policy

Woodford Valley C.E. Primary Academy is committed to creating the ethos in which children can grow towards Christian life, learning and love.
And now I give you a new commandment: love one another. As I have loved you, so you must love one another. If you have love for one another, then everyone will know that you are my disciples."
John 13 34-35

Introduction

We teach Mathematics in accordance with the new National Curriculum (2014), using guidance from DfE Mathematics guidance for key stages 1 and 2 Wiltshire's Mathematics Team and the White Rose Maths Team to help us map and plan objectives effectively across the year.

Intent

Our intent, in line with the National Curriculum (2014) are for pupils 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
- reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language
- solve problems by applying their 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.

We understand that children are ready to develop and move on from one stage of a mathematical concept or skill to the next at very different rates. We have adopted an evidence-based teaching for mastery approach to delivering the national curriculum which ensures that all pupils have secure understanding of a mathematical concept before progressing on to the

following concept. Consequently, although we aim to teach objectives specific to the year group, as set out in the national curriculum, identified gaps are addressed. Teachers use their professional judgement; refer to the DfE guidance for Mathematics in KS1 and KS2, also known as the Ready to Progress Criteria (RtP); and previous year group objectives where appropriate. Pupils who grasp concepts rapidly should be challenged through being offered rich and sophisticated problems that deepen their understanding at their current level before any acceleration through new content.

We have a high expectation that children's work should always be presented clearly and neatly, and that the children use correct mathematics vocabulary at all times when communicating their understanding.

Throughout this experience, we aim to promote amongst children a sense of fun in their work and a love of Mathematics.

Overview of pupils' mathematical experience

The majority of children follow the National Curriculum (2014) for Mathematics, which is organised in 4 key areas: number, measurement, geometry and statistics, with ratio/proportion and algebra added in Upper Key Stage 2. A typical Numeracy lesson usually consists of direct teaching and interactive oral work with the whole class, a group and/or individuals. There is a strong emphasis on developing mental arithmetic skills within lessons, as well as high expectations for children to show all stages in their workings, including formal written methods where appropriate.

The children in Reception follow the EYFS curriculum which prepares them for learning in Key Stage 1 and is consistent with the National Curriculum. Children develop their understanding of number, measurement, pattern, shape and space in a broad range of practical and play contexts, enabling them to explore, enjoy, discuss, learn and practice mathematical concepts.

Learning objectives are shared with children during each session to focus their understanding and help teachers, and pupils, assess knowledge and learning. Regular marking, verbal and written feedback and pupils' own comments provide an informal assessment of the work completed, in accordance with the Academy's Marking Policy. Teachers highlight and model specific mathematical vocabulary and ensure that children use this with confidence within the lesson and in their work.

The children are assessed formally at termly intervals on selected objectives covered during the term. Teachers carry out pre- assessments at the start of a topic and assess again at the end of a topic. This enables teachers to see the impact of their teaching and for pupils to celebrate their success. Targets are either set individually, as a group or as a whole class, and are shared with the children and parents at parents' evenings. Assessment in the EYFS stage occurs through observation, following the Early Years Foundation Stage Profile. Assessment of the children with SEN is continuous, perhaps using different assessment methods chosen by the teacher appropriate to the pupil's own needs.

Implementation

Long term planning differs for each year group and is based on year group objectives from the National Curriculum (2014). Teachers prioritise pupils' secure understanding of content covered in the RtP criteria and may choose to deliver curriculum content not covered by the RtP criteria as part of other subjects eg. science in order to facilitate this. Teachers use their

professional judgement to plan thorough coverage of all areas across the year. Key objectives are shared with parents through our class web pages and on our website's Maths subject page.

Teachers' **weekly planning** formats set out key objectives and teaching and pupil activities for each day to meet the stated objectives. We do not follow a scheme of work at Woodford Valley, which allows teachers to plan in a way that best suits the needs of their class. Teachers plan using a wide variety of resources, which might be online or in a book, but also create their own questions using their understanding of the curriculum expectations. We aim to be eco-aware, particularly in KS2, by not relying too heavily on worksheets; this also sets an expectation for children to record their own calculations and workings out in a neat and organised fashion from an early stage. Differentiation is shown clearly on each teacher's weekly planning, which might include a differentiated activity or support level. In line with mastery principles, the use of manipulatives is actively encouraged at every stage, and should be an integral part of delivering the KS1 curriculum, and in SEN intervention programmes where appropriate.

Intervention programmes

Our school Provision Map sets out specific intervention programmes to support children with gaps in their mathematical understanding. In addition, Booster Classes take place in the Spring and Summer terms for small groups of Key stage 2 children, and 1:1 or small group tuition is offered for individuals identified by the class teacher, which may involve targeted numeracy provision. We also provide/seek out opportunities to extend our able, gifted and talented pupils.

High quality teaching

We acknowledge that the most effective learning takes place where there has been evidence of teacher-led, direct teaching. Teaching for mastery ensures that all pupils have secure understanding of a mathematical concept before progressing on to the following concept. High quality direct teaching is visual, oral, practical, interactive and lively. It is a two-way process in which pupils are expected to play an active part by answering questions, contributing points to discussion, and explaining and demonstrating their methods to others.

High quality teaching is achieved by balancing:

- directing
- instructing
- demonstrating
- explaining and illustrating
- questioning and discussing
- consolidating
- evaluating
- summarising
- learning from mistakes.

The pupils must have a broad and balanced selection of learning activities based on the learning objectives from the National Curriculum (2014), which might include:

- practical work

- an investigation
- a problem-solving activity
- an oral or mental activity
- a written activity from a wide range of publicised schemes or one that has been created by the teacher
- a computer-based activity (e.g. 'My Maths' or 'Top Marks') that supports and enhances a learning point.

Pupils' record of their work
In all aspects of Mathematics, we encourage children to present work clearly and neatly, in line with the academy's Handwriting Policy. We believe that this helps them to clarify their own thinking for themselves, for their peers, and for adults working with them, which is helpful in identifying patterns and trends in their work. Having a record of their learning is a useful reference for future work. It also provides evidence of the work in mathematics for the child, for their parents, for the teacher and for any other outside agency. We encourage children to show their workings out in all mathematical tasks and to estimate a sensible answer as a quick check strategy. We believe that children should use the appropriate instruments and equipment as and when they are ready, and time is taken to ensure children know how to use the variety of resources available to them.

Recording will take different forms, depending on the nature of the mathematical activity and the purpose of the record. It can be:

- symbolic
- practical
- graphical
- diagrammatical
- pictorial
- written (recorded in books or on whiteboards)
- computerised.
- Photographic (Primarily KS1/EYFS)

Homework is set in accordance with the school's homework policy.

Impact and target-setting

Assessment of each child's mathematical ability is an ongoing and continuous process that should include the opportunity to set targets at regular intervals. The children are encouraged to take an active part in their own assessment on a daily basis.

Termly assessments (either formal written assessments or teacher assessments based on classwork and observations) provide regular updates on pupil achievements and help teachers track progress and plan next steps. Children's progress is tracked using the Mini-tracker in every class so that we can monitor added value, achievement in line with expectations, and causes for concern.

Within the Foundation Stage, mathematical skills are observed throughout the year. These are added to the children's EYFS Profile which is shared with parents at parent's evenings; a written summary is sent home in their end of year report.

For identified SEN pupils, mathematical development is continually observed and assessed using smaller objectives or Year Group Expectations. Targets are set for groups or individuals and progress is shared with pupils and parents regularly and formally in the annual review (for pupils with an EHCP) and in the end of year report.

Years 1, 3, 4 and 5 sit annual end of year tests, which allow us to identify whether a pupil is working towards, working at or working above year group expectations. These papers are moderated and individual targets are set that are both challenging and achievable. These are included in each pupil's end of year report and are shared with parents at parents' evenings. Year 2 and Year 6 sit Statutory Assessment Tests (SATs), the results of which are also shared on the pupil end of year reports. At the end of each academic year, the coordinator makes a detailed analysis of the data from Year 2 to Year 6 and identifies stronger and weaker areas of learning and teaching; these areas form the basis of whole school and year group curricular targets for the coming year.

Monitoring the quality of our teaching

The Mathematics subject leader is responsible for supporting colleagues in the teaching of Mathematics, for being informed about current developments in the subject, and for providing a strategic lead and direction for the subject throughout the school. This takes place by:

- leading regular staff meetings to inform staff of any updates within Mathematics
- attending cluster and LA subject leader meetings
- auditing resources and managing the subject budget to ensure class teachers have necessary resources
- SLT making regular observations of the teaching throughout the school and giving feedback to staff
- monitoring planning (also completed by the Head Teacher)
- making staff aware of any appropriate CPD opportunities
- reporting to the headteacher and the governor responsible for mathematics on curriculum progress and standards
- leading moderation of work across the key stages, to ensure that all staff are aware of the levels expected at each stage of learning
- moderating work with other schools in the cluster or LA.