

ST JOHN'S CHURCH OF ENGLAND PRIMARY SCHOOL

MATHEMATICS POLICY

Aims

At St John's CE Primary School, we want to ensure teaching is consistent and lessons are good so that every pupil receives a sound mathematics education.

We aim for all of our children to foster a love of mathematics and be able mathematicians because they:

- Have a strong conceptual understanding of maths; its structures and its relationships
- Can recall and apply their knowledge confidently and efficiently
- Are secure in using written methods for which they have a clear understanding

We aim to weave problem solving and investigative skills throughout our mathematics teaching as well as skills in communication and collaboration.

Through careful assessment, planning and preparation we aim to ensure that all children progress when they are ready. New knowledge and skills should be secured before new material is introduced. For those who grasp new material quickly, they should apply this to challenging problem solving tasks.

Teaching and Learning

All teaching must be at least good. This will be developed through clear policies and regular professional development from a range of sources to develop:

- The expertise and subject knowledge of staff to help deliver the school's curriculum thoroughly and consistently.
- Choosing practical resources, visual images and information and communication technology that promote inclusive teaching and a deeper understanding for all.
- Using good assessment techniques to listen flexibly to children and to check and probe their understanding throughout.

Inclusion

The following principles inform and guide our policy and practise:

1. Meeting the diverse and complex needs of each and every individual is embedded in everything that we do as a whole staff.
2. It is the responsibility of the school to enable the child to access and make progress through the curriculum.
3. For every child to be able to participate we must know each of them as individuals. For children with SEND teaching must be closely linked to the learning outcomes on their support plans. We respond to children's diverse learning needs by:
 - Creating effective learning environments
 - Securing their motivation and concentration

- Providing equality of opportunity through a range of teaching approaches and modifying these for individual needs
- Using appropriate assessments (such as B- Squared Small Steps)
- Setting targets for learning
- Teaching more able children with their own class and extending their learning through differentiated group work, extra challenges and opportunities for independent learning.

Curriculum

The school works to the expectations set out in the framework document for the national curriculum 2014.

Teachers use a variety of materials including Liverpool Planning and Maths Hub materials as a tool for both medium term and weekly planning. Wherever possible, they try to give maths a context so there is purpose for learning. In addition, they place an emphasis on rich, applied mathematical tasks which allow the children many opportunities to persevere with problem solving. Using the school environment and the wider world, the curriculum ensures children explore, make connections, seek patterns, recognise relationships and are creative with mathematics.

As a school we encourage use of a wide range of practical equipment to support this conceptual development including Numicon, Base Ten, Cuisenaire Rods, number lines, one hundred squares and much more.

We follow the St John's C.E. Primary School Calculation Policy (developed in 2014) which gives an overview of the development of addition, subtraction, multiplication and division from Reception to Year 6. Teachers use this information on progression through each strand and how to use practical resources and models to develop understanding at each stage.

Planning

Teachers plan for deep coverage and mastery of the school's curriculum through both daily maths lessons and additional opportunities to develop mental maths skills such as 'Four a Day' activities and basic skills.

Plans for weekly maths lesson try to cater for all learning styles (Visual, Aural and Kinaesthetic).

Lessons include opportunities for:

- practical activities and mathematical games
- problem solving
- individual, small group and whole class discussions
- open and closed tasks
- a range of methods of calculating e.g. mental, paper and pencil and calculator
- working with ICT
- outdoor learning

Classes are mixed ability and the groups within classes are fluid. Teachers will use a range of grouping methods when planning.

Assessment

All assessment is used to inform teaching and learning. We identify children's levels of understanding and then swiftly act to address any misconceptions.

At St John's we assess children in the following ways:

- Continuously through verbal feedback in lessons.
- Marking and next steps in books.
- 'Mind the Gap' intervention
- Use of NFER Autumn and Summer Tests.
- Other short tests on topics.

Year Group assessment sheets are stuck in the front of their maths books and filled in half-termly, drawing on the information gained in the above. Towards the end of the school year we assess and review pupils' overall progress and attainment; accurate information is then reported to parents and the child's next teacher. During the year staff from different year groups have the opportunity to moderate books with other schools. End of Key Stage assessments are moderated either with other schools or by the Local Authority.

The role of teaching assistants

Teaching Assistants are actively involved in teaching small groups within lessons and in providing intervention sessions. They support groups in the classroom. They offer sensitive support and are expected to modify tasks, materials and teaching resources as required. They demonstrate initiative in using practical resources to support learning and help pupils overcome difficulties, for example by using strings of counting beads to aid early multiplication. They are careful not to over-direct pupils' learning. They spot misconceptions and gaps in learning, and take responsibility for assessing pupils in their groups and discussing children with class teachers.

Use of ICT

The role of technology in our mathematics curriculum is to motivate and engage children. It is often used as a teaching tool to demonstrate visual images to children. All children in our school from Year 1 to Year 6 have access to Mathletics and are encouraged to use this at home as well as in school. Children who have no internet access at home are encouraged to come to Mathletics clubs in school in order for them to be offered the same opportunities.

Children who find mathematics difficult

At St John's we have the highest expectations for all children. We act early to secure the essential knowledge and skills of the least able. Within class, common misconceptions are addressed as soon as possible with either an individual or group being set an extra 'Mind the Gap' type activity – or in some cases, if the need arises a whole class lesson being planned around it.

For children who require more intervention than this we can offer in a class lesson out TA's use First Class @ Number in Years 1 and 2 and a more sophisticated First Class @ Number in Years 3 and 4 to try to close the gap. We also use more tailored programmes drawn up between teacher and TA to cater for individual Learning outcomes.

Leadership

At St. John's C.E Primary School our maths subject leader leads by example. To tackle barriers and ensure consistency, they are responsible for:

- Monitoring teaching and learning through lesson observations, work scrutiny and pupil interviews.
- Using the information gathered from data analysis to improve teaching and the curriculum.
- Checking interventions are happening and deploying support staff effectively.
- Assisting with individual and group target setting if needed and ensure progress against these targets is effectively shared with parents.
- Preparing and organising INSET as necessary.
- The Maths Subject Leader must also work in partnership with other members of the leadership team and the Maths Governor in raising standards in Mathematics across our school and maintaining the high profile of mathematics in the School Improvement Plan.

Date Policy Written: September 2016

Member of staff Responsible: Charlotte Preston

Date Approved by the Governing Body: October 2016

Date for Review: September 2019