

St James the Great School RC
(VA) Primary and Nursery School



Numeracy Policy

Revised autumn 2007

Rationale

From St James the Great Mission Statement:

“...the school will provide a framework within which all pupils are enabled to develop the highest possible level of achievement, fulfilling their academic, moral, physical and spiritual potential.”

Aim

The overall aim is to encourage children to develop their mathematical education along a broad range of experiences whilst ensuring progression.

Objectives

At St James the Great all children will have equal access to a curriculum, which will

- Extend each child to his or her potential, building on previous experiences and recognising individual capabilities
- Encourage the children to have a positive attitude towards mathematics and foster interest, confidence and enjoyment in the subject
- Enable children to achieve a high standard in Numeracy and a range of other mathematical skills and apply these skills with confidence and understanding when solving problems
- Provide opportunities to apply mathematical learning in everyday situations and provide a range of skills which can be applied in later education and throughout life
- Provide the children with appropriate experiences in order to develop confidence and fluency in the use of mathematical language and concepts
- Enable children to have a sense of the size of a number and where it fits in the number system and know by heart number facts such as number bonds, multiplication facts, doubles and halves
- Enable children to calculate accurately and efficiently, both mentally and with paper and pencil, drawing on a range of calculation strategies and understanding of the required operation
- Recognise where it is appropriate to use a calculator and to be able to do so effectively
- Encourage children to explain their methods and reasoning using correct mathematical terms and to judge whether their answers are reasonable and to have strategies for checking them

Numeracy in the Foundation Stage

In the Foundation Stage the children will meet mathematics through play and real life experiences, promoting an enjoyment and curiosity about all aspects of the subject. The Foundation curriculum will be based upon 'The Early Years Foundation Stage' practice guidance. Planning will ensure progression and to meet the needs of individual children. The children will be supported in developing their understanding of Problem Solving, Reasoning and Numeracy in a broad range of contexts in which they can explore, learn, practise and talk about their developing understanding.

The work undertaken will be largely practical with some recording as appropriate.

Organisation in Key Stage 1 and Key Stage 2

Year 1 numeracy lessons are class based, arrangements in year two will be either class based or grouped across the year in line with the needs of the particular cohort. Key Stage 2 children are grouped across the year group according to individual needs; the children are regularly assessed and moved to meet their needs.

Children will be taught numeracy based upon the structure and planning of the Primary Framework for Mathematics. Learning objectives are always shared with the class and success criteria made clear.

The daily numeracy lesson may include:

- **A Mental and Oral Starter** – Warm up, practise and recall of skills involving the whole class.
- **A Main Teaching Activity** – Direct teaching through demonstrating, modelling and discussion. Teachers use a variety of visual, aural and kinaesthetic resources and mathematical language. Children participate actively in activities related to the learning objective
- **A Plenary** – Children are encouraged to reflect on their learning and their development of mathematical skills.

All numeracy lessons are based upon common objectives for the group or class. Within each part of the numeracy lesson there is suitable differentiation to meet the needs of the whole class, group or individual children, including where appropriate, expectations relevant to different year groups.

Planning

Primary Framework for Mathematics provides long term planning. Medium term planning follows the guidance and pacing suggested within the strategy. Short term planning is completed weekly and includes teaching and learning activities, differentiation, focus support and vocabulary.

A system of highlighting successfully covered and partially covered key objectives allow for clarity of coverage and are passed from teacher to teacher.

Assessment

Children are actively encouraged to participate in self-assessment of their progress in numeracy.

Short Term Assessment takes place during the lesson as questions and answers, and the evaluation and marking of children's work. Notes are kept on children who do not achieve, or exceed, learning objectives at the bottom the weekly planning sheet to inform short and medium term planning.

Medium Term Assessment takes place at the end of units of work. These assessments are reviewed termly on the class assessment and target setting sheets and provide a record of the children's progress.

Long Term Assessment takes place at the end of each academic year and will be passed on from class to class from Reception onwards. Reception will complete PIPS (Performance Indicators in Primary Schools) on entry, at the end of reception year and year one. Years two and six take part in national tests, optional QCA tests are used in years three, four and five.

An analysis of the children's achievement will be used to inform school focus of short and long term curriculum targets, INSET and resourcing issues, as well as to target children for appropriate intervention packages.

Targets are set for individual children within a group and are recorded in the class assessment file.

Inclusion

Children with special educational needs in mathematics, those that require extra support to achieve national targets and those with exceptional mathematical ability, will be identified through assessment and tracking.

Individual Educational Plans, the use of appropriate resources and Learning Support Assistants, will support children who are not achieving set targets.

Appropriate resources are available to support the more able.

Children's Recording

At St James the Great we place emphasis in our teaching of numeracy on the importance of discussion and the development of thinking and reasoning skills. Children will be actively encouraged to use pictures, diagrams and written methods to support and show their thinking. This will include the development of jottings, empty number lines and informal methods on route to the use of compact methods for addition, multiplication, subtraction and division.

The school guidance for the teaching of written calculations is attached to this policy.

The children will record their work in numeracy exercise books with squared paper from year 1 onwards. In years 1, 2, and 3 they will use 10 mm squares progressing to 7mm squares by the end of year 3. In years 4 and 5 they will record their work on 7mm squared paper progressing to 5mm squares as appropriate in year 5. Year 6 will use 5mm squared books. Within the book the work will be presented in a standard form throughout the school. Pages will be folded to provide two columns, work will be dated and a heading of the page number and book or other appropriate title given. The children will work down the columns numbering their work as appropriate, leaving at least 1 square between the number of the sum and the calculation and at least one line between each calculation. There will only be two columns of work per page and if there is insufficient width in the column for the calculation the children will work down the page in one column only. The children will in all year groups present their work using one digit per square and all lines will be drawn with a ruler. Work that is undertaken on graph paper or worksheets will be placed in an individual numeracy folder.

Marking

Numeracy will be marked in accordance with the school marking policy.

Cross Curricular Links

Information Communication Technology: It is aimed that teachers will incorporate ICT whenever possible in numeracy lessons. Strong links will be made between modelling, controlling and graphics in the ICT curriculum.

Numeracy specific ICT resources will be used in small groups and whole class teaching sessions when beneficial to support the objectives.

Calculators are seen as a valuable teaching and learning resource to support the children's learning about numbers and operations and also as a motivational tool to sustain thinking in longer investigations. Teaching the use of the calculator as a calculating tool is an integral part of teaching problem solving and calculation from year four.

Wherever possible, skills and concepts learned within the numeracy lessons are followed up and reinforced within other curriculum areas.

Resources

Teachers plan from a wide range of published resources to suit their class needs. These resources are kept in central storage and support in their use is offered by the mathematics co-ordinator.

Each class is equipped with a set of teaching resources to support an emphasis on resource based teaching. Specialist equipment is kept in central storage. Resource needs are audited annually and purchased in order of priority.

Homework

Children are given one maths homework activity per week in Year 1, rising to two per week in Year 2 and beyond. There will be a planned progression in the tasks set with the emphasis of parental involvement and games in KS1 through to longer, more independent tasks by the end of KS2. Homework will be linked to current teaching.

Parental/Carer Involvement

Parents and carers will be kept informed of children's achievement and curriculum targets through reports and parent consultation evenings.

Workshops and information events will be used to support parents and carers in their understanding of mathematics teaching and disseminating ways to support children learning mathematics at home. Parental involvement is seen as crucial to success at school.

The Role of the Co-ordinator

The mathematics co-ordinator will work closely with staff and the mathematics governor to plan for and sustain improvement in the teaching and learning of mathematics.

The co-ordinator will:

- Lead staff development through developing their confidence and expertise with INSET, staff meetings, support and advice.
- Take the lead in policy development and the production of schemes of work designed to ensure progression and continuity in numeracy throughout the school.
- Support colleagues in their development of detailed work plans and implementation of the scheme of work and in assessment and record keeping activities.
- Monitor progress in numeracy and advise the head teacher on action needed.
- Monitor planning, teaching and learning and disseminate good practice.
- Take responsibility for the purchase and organisation of mathematical resources.
- Keep up to date with developments in mathematics education and disseminate information to colleagues as appropriate.