

MATHS POLICY – ST. BARTHOLOMEW’S PRIMARY SCHOOL

September 2014

‘Believing, Achieving, Succeeding’

The following information has been taken directly from the new National Curriculum for Maths, and has been in place since September 2014.

Purpose of study

Mathematics is a creative and highly inter-connected discipline that has been developed over centuries, providing the solution to some of history’s most intriguing problems. It is essential to everyday life, critical to science, technology and engineering, and necessary in most forms of employment. A high-quality mathematics education therefore provides a foundation for understanding the world, the ability to reason mathematically, and a sense of enjoyment and curiosity about the subject.

Aims

The National Curriculum for mathematics aims to ensure that all pupils:

- become **fluent** in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils have conceptual understanding and are able to recall and apply their knowledge rapidly and accurately to problems
- **reason mathematically** by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language
- can **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.

The programmes of study are organised in a distinct sequence and structured into separate domains. Pupils should make connections across mathematical ideas to develop fluency, mathematical reasoning and competence in solving increasingly sophisticated problems. They should also apply their mathematical knowledge to science and other subjects.

Information and Communication Technology (ICT)

Calculators should not be used as a substitute for good written and mental arithmetic. They should therefore only be introduced near the end of Key Stage 2 to support pupils’ conceptual understanding and exploration of more complex number problems, if written and mental arithmetic are secure. In both primary and secondary schools, teachers should use their judgement about when ICT tools should be used.

Spoken language

The National Curriculum for mathematics reflects the importance of spoken language in pupils' development across the whole curriculum – cognitively, socially and linguistically. The quality and variety of language that pupils hear and speak are key factors in developing their mathematical vocabulary and presenting a mathematical justification, argument or proof. They must be assisted in making their thinking clear to themselves as well as others and teachers should ensure that pupils build secure foundations by using discussion to probe and remedy their misconceptions.

School curriculum

The programmes of study for mathematics are set out year-by-year for Key Stages 1 and 2. Schools are, however, only required to teach the relevant programme of study by the end of the key stage. Within each key stage, schools therefore have the flexibility to introduce content earlier or later than set out in the programme of study. In addition, schools can introduce key stage content during an earlier key stage, if appropriate. All schools are also required to set out their school curriculum for mathematics on a year-by-year basis and make this information available online.

Attainment targets

By the end of each key stage, pupils are expected to know, apply and understand the matters, skills and processes specified in the relevant programme of study.

Maths at St. Bartholomew's Primary school – Year 1 to Year 6

Planning

Teachers use the document 'Medium Term Overviews and Short Term Plans', which outlines the objectives to be covered each half-term and the advice for daily lesson planning. The introduction states:

Who is this book for?

The purpose of this planning document is to map out the mathematics medium term plan for the academic year. It should be used in conjunction with the Mathematical Vocabulary Booklet and Progression, Long Term Plan and Key Concepts documents. The daily lesson plans will add the detail such as Success Criteria and differentiation.

There are **36 mapped** weeks for the delivery of the year groups' objectives and curriculum coverage. It is important that the order of the units is maintained in sequence as

concepts build upon each other week by week. However, there are 2 flexible weeks (as we have 38 weeks in the academic year) that could be used for extension or reinforcement of learning at any given point.

It is designed to support the 2014 National Curriculum for Mathematics at Key Stages 1 and 2.

This booklet will be relevant and useful for all the following at St. Bartholomew's:

- Class Teacher/Maths Set Teacher
- Teaching Assistants/Learning Support Assistants
- Inclusion Manager and Teaching and Learning Manager
- Parents
- Pupils
- Volunteers
- Supply Staff
- Trainee Teachers

How do I use the Medium Term Plans?

These should be filled in at the start of each term, and adjusted a half term at a time as a result of what has happened in the learning to date. At your planning meetings:

- Add the week numbers from the main calendar.
- Add the dates.
- Build in 'Assess and Review' time/activities, to evaluate progress and inform future planning
- The objectives are broad and may need breaking down further.
- Add a copy of the MTP to planning files on the Shared Area and remember to annotate if you make changes.
- Copy objectives into the weekly/daily plans and highlight when the objectives have been covered.

Daily/Weekly Plans

- At the start of each week copy the objectives from the Medium Term planning sheets, and map out the week ahead (a draft that can be developed as the week progresses).
- Monday and Tuesday could be planned in more detail, and subsequent lessons should be adapted based on the outcomes or evaluations of previous lessons.
- Teachers should save the completed weekly plan at the end of the week, on the Shared Area.
- Refer to the Calculation Policy for agreed jottings and standard written methods of the four operations.
- Each weekly plan must show general ability groups, and indicate EAL/SEN/FSM etc.

TEACHER:	YEAR:	Date:
Mental Objective	Mental Activity	TA/Resources
What do I need to take note of from yesterday/previous learning?		
Main Learning Objective:		

Vocabulary:		
Brief outline of teaching input:		
Activity:	Activity:	Activity:
Pupils/Adults:	Pupils/Adults:	Pupils/Adults:
Success Criteria: (I can statements, or Must/Should/Could, or All/Most/Some)		
Plenary/Mini-Plenaries: (key questions, reflecting on learning, applying to problems)		
Evaluation: (Which pupils have not met the SC, and so how will you support them further? Next steps in the learning process?)		

Years 2 and 6 are not required to use the New Maths Curriculum until September 2015.

Calculations Policy

The Calculations Policy has been devised to meet requirements of the National Curriculum 2014 for the teaching and learning of mathematics, and is also designed to give pupils a consistent and smooth progression of learning in calculations across the school. Early learning in number and calculation in Reception follows the “Development Matters” EYFS document, and our calculation policy is designed to build on progressively from the content and methods established in the Early Years Foundation Stage.

The calculation policy is organised according to age stage expectations as set out in the National Curriculum 2014, **however it is vital that pupils are taught according to the stage that they are currently working at**, being moved onto the next level as soon as they are ready, or working at a lower stage until they are secure enough to move on.

The policy sets out the written methods for each year group, for each of the number operations – Addition, Subtraction, Multiplication and Division.

Assessment

Assessment takes place in many ways:

- Teacher Assessment – Teachers evaluate pupils’ achievement and understanding on a daily basis. They use this ‘Assessment for Learning’ to inform future lessons, so that progress can be built on. Teacher assessments are discussed at half-termly Pupil Progress meetings. When a child is not performing according to expectations, then teams will discuss how that child may be supported e.g. changing groups within the class/set, making additional resources/equipment available to the child, extra intervention by the class TA etc.
- Assess and Review Weeks – the half-term plans allow time to assess the children. This could be in the form of a simple test, to check achievement against given objectives, or it could be through a planned maths activity in which the teacher/TA listens to maths talk and looks at recorded work.
- SATs Tests – Year 2 pupils do complete a Maths Test, and this helps to inform teacher assessments. Year 6 pupils sit their Maths SATs in May – two written papers and a mental maths test. The new test, based on the new curriculum, will be published in 2016.

The new Maths Curriculum is in its early stages, and we will await further advice on assessment.

Homework

Homework is set for pupils in KS2. This consists of short written exercises, activities or games which consolidate and develop work done in lessons. These tasks are designed to motivate and stimulate pupils' learning, as well as encourage good study skills. They may comprise of the following:

- Activities that make use of maths in the home context
- Number games or puzzles
- Number facts to learn by heart
- Activities requiring pupils to collect data or take measurements
- Problems to think through and decide how they might be solved
- Preparing contributions to group presentations to the class, or to maths displays

We also encourage parents to engage in a range of mathematical activities, be it helping their child with homework activities, testing their child on their times tables, playing games provided by school or joining in playing board games that develop use of number and money.

Resources

All Foundation and Key Stage 1 classrooms have a wide range of appropriate small apparatus. Most resources for Key Stage 2 are kept in Da Vinci classroom. These include textbooks, measuring equipment, calculators, protractors, 2D and 3D shapes, and teacher reference books. Classrooms are equipped with an Interactive Whiteboard, the ICT suite houses 30 computers (which are networked and have the appropriate software and internet access) and the pupils also have access to iPads.

Monitoring and Review

Monitoring of the standards of children's work and the quality of teaching and learning in Maths is the responsibility of the subject leader. The work of the Maths co-ordinator also involves monitoring teachers' plans, supporting colleagues in their teaching, being informed about current developments in the subject and providing a strategic lead and direction for mathematics in the school. The Headteacher and Governing Body are also provided with a summary of developments and progress in Maths.

This policy will be reviewed every two years.

Related documents:

- Calculations Policy
- Medium Term Overviews and Short Term Plans
- Mathematics Vocabulary
- Progression, Key Concepts and Long Term Plans
- Equal Opportunities Policy

September 2014