



St Anne's Catholic Primary School

Mathematics policy

Approved by staff: May 2016

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Ratified by the full governing body: 28th June 2016

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1 The Purpose of this Mathematics Policy

1.1 The purpose of this Mathematics Policy is to offer guidance and continuity as to how we, as a staff, approach the teaching, implementation and learning of mathematics at St. Anne's School.

2 Aims

2.1 The aims for teaching for mathematics at St Anne's School are:

- To develop and use computational skills with confidence, understanding, speed and accuracy;
- To develop understanding and use mathematical language;
- To understand the application of mathematical ideas in different everyday situations;
- To develop the ability and confidence to tackle mathematical problems;
- To equip the children for the mathematics they will need in everyday life, including the need to think logically, solve problems and think in abstract ways.

3 Objectives

3.1 To adopt an approach based on the following four key principles:

- Dedicated mathematics lessons each day, which last about 45 minutes in KS1, and up to 60 minutes in KS2. In the Foundation Stage there is some teaching and opportunities for mathematical activities daily, with a targeted guided mathematical activity fortnightly;
- Direct teaching and interactive oral work with the whole class and groups; this usually takes the form of the three part lesson;
- An emphasis on mental calculation;

- Controlled differentiation, with all children engaged in mathematics relating to a common theme.
- 3.2 It is also important to find time in other subjects for children to develop and apply their mathematical skills, for example, planning opportunities within CLJ topics or through our Science topics.
- 3.3 Children actively take part and enjoy their mathematics lessons and develop an appropriate mathematical vocabulary as modelled by the teachers using guidance from the National Curriculum.

4 Teaching and Learning Strategies

- 4.1 As a school we are aiming to achieve a consistent approach to the teaching and learning of mathematics.
- 4.2 In each year group children are taught in mixed ability classes and within every lesson mathematics is related to a common theme with differentiation ideally at three levels of ability.
- 4.3 Differentiation is manageable with targeted, positive support to help those who have difficulties with mathematics.
- 4.4 Lesson time is devoted to the teaching and learning cycle of review, teach, practise, apply and review.
- 4.5 Work is carried out using a balance of individual, paired and group work.
- 4.6 Teachers demonstrate, explain and illustrate mathematical ideas to fully involve children, using a variety of models and images. They maintain children's interest through appropriately demanding work.
- 4.7 Teachers use, and expect children to use, correct mathematical notation and vocabulary.
- 4.8 Mathematical errors and misconceptions are dealt with as they are identified in a positive and supportive way. The plenary is an ideal opportunity for dealing with misconceptions.
- 4.9 Pupils' learning begins with concrete experience, leading onto mental strategies and finally to formal representations as laid out for year groups in the National Curriculum and calculation policy.

5 Planning

- 5.1 There are three elements of the planning cycle for the teaching of mathematics.

- 5.2 Long-term planning follows the yearly programmes of study as laid out in the National Curriculum and the EYFS Development Matters for the Foundation Stage.
- 5.3 Medium-term planning is based on objectives from the National Curriculum.
- 5.4 Short-term planning is in the form of weekly plans in years 1 to 6 which includes; daily objectives, teaching and activities, vocabulary, key questions and resources and where support is targeted. In Foundation Stage planning includes weekly objectives and teaching; daily activities are included on the provision plan.

6 Additional Support

- 6.1 **Successmaker.** Successmaker is a collection of programs including developing Numeracy running on school P.C.'s. They are designed for children from age five to twelve. The programs are intended to be accessed weekly by each child in years 1 to 6 and are also available on classroom computers as well. The programs are self-levelling and adjust to the child's ability and strengths, while flagging up to the system manager individual children's current areas of difficulty. With teacher intervention, the programs progress the children through major aspects of the Numeracy curriculum. The Numeracy questions, in addition, are problem based which is intended to develop the children's problem solving skills.
- 6.2 **Sumdog.** Sumdog is an online platform to which all children in KS2 are signed up to. It uses motivating games to encourage students to practise their mathematics. As students work, their adaptive learning engine monitors their progress and targets its questions to their needs. This allows children to play with their classmates, even if each one is working on different skills. Sumdog's games can be used to work on any skill. This means students are free to play what they want - but teachers retain control over what they are learning.
- 6.3 **Wave 3**
5 Minute Box. 5 minute boxes are introduced in KS1 and continued in KS2 where necessary. These are used to help build confidence with children who are under achieving in Mathematics. With these they look at shape names, money values and simple addition and subtraction sums. All of this is done through practical activities.
In addition to the 5 Minute Box we have an assessment tool to identify dyscalculia. Through a combination of discussion with teachers and analysing data, children are highlighted for initial and standardised assessment. If the pattern of results is typical of someone who has dyscalculia, then a program will be set up to further support the child.
- 6.4 **Maths Intervention Program.** This is a program to encourage children to build their confidence by breaking skills and concepts into the most basic steps of perception and understanding. Currently at St Anne's, children from years 4, 5 and 6 are supported through this program.

7 Homework

- 7.1 Setting and completion of regular Homework is timetabled for each year group across the school. In KS2 teachers keep a weekly register to ensure homework is complete and handed in on time.

8 Marking Work

- 8.1 Pupils' mathematics recordings should be marked regularly. Positive comments should be made to recognise pupils' achievements and/or support them in their knowledge and understanding in accordance with our marking and feedback policy.

9 Assessment and Record Keeping

- 9.1 Assessment takes place at three connected levels: short-term, medium-term and long-term. These assessments are used to inform teaching in a continuous cycle of planning, teaching and assessment.
- 9.2 Short-term assessments are an informal part of every lesson to check their understanding and give you information, which helps to adjust day-to-day lesson plans.
- 9.3 Medium-term assessments are carried out using Maths target grids with outcomes linked to the National Curriculum.
- 9.4 Long-term assessments take place in the middle of the summer term, this is used to assess and review pupils' progress and attainment. Included in these are the compulsory National Curriculum mathematics tests for pupils in Years 2 and 6 and other tests. Teachers also draw upon their class record of attainment against key objectives and supplementary notes and knowledge about their class to produce an end of year report. Accurate information is then reported to parents/carers and the child's next teacher.

10 Involving Parents and Carers in the teaching of Mathematics

- 10.1 We involve parents/carers in the following ways:
- Encouraging them to Support their children to complete homework;
 - Organising "Maths or Key Stage Workshops" for parents/carers to attend;
 - Through Teacher and Parent/Carers conferencing, in Autumn and reviewed in the Spring term, where targets are set to support child's learning;

- Presently, parents of Key Stage 1 & 2 SATS children are briefed on the curriculum to be taught in preparation for the tests.

11 Maths Resources within the School

11.1 Centrally resourced Maths cupboards can be found in the corridor outside the staff room. The cupboards are labelled according to their contents. Each class stores materials necessary for day-to-day teaching of Maths.

11.2 *Whole School resources:*

Number lines	Clocks
Spinners	Sand timers
Dice	Stopwatches
Place value cards	Tape measures
0-100 number cards	Metre rulers
Base blocks	Trundle wheels
Times tables games	Measuring jugs and containers
2D shapes	Scales
3D shapes	Weights
Nets of 3D shapes	Money
Peg boards	Fraction pies
Multilink	Fraction walls
Clix	Fraction and decimal resources
Protractors	Teacher resources
Sorting hoops and trays	

11.3 *Computer programs with Maths applications*

- Calculator
- Internet Access – a variety of Maths activities
- Testbase – Access to past SATS paper questions
- Sumdog
- LGfL content
- 2 simple software
- Espresso primary
- Fizzy's number skills
- Maths City 1

- Maths games 1
- Tux of maths commands games

11.3 ICT equipment

- Probots (angles multiples of 10)
- Sensors (temp, sound & light monitoring)
- Calculators

12 Related policies

12.1 See also:

- Assessment;
- Early years;
- Equal opportunities;
- Homework;
- Marking and Feedback;
- More Able and Talented;
- Presentation;
- Principles of Learning;
- SEND;
- Staff Code of Conduct;
- Teaching and Learning