Mathematics Policy

1. Rationale

1.1. At Our Lady's we believe a high quality Mathematics education will provide our children with a foundation for understanding the world around them. We aim to inspire a curiosity and enjoyment of number and an appreciation of its power and diversity. The expectations we have of children's learning within Mathematics are high and the content is aligned to the programmes of study outlined in the Mathematics National Curriculum 2014 and delivered following Mastery principles.

1.2. Teaching for mastery in Maths is the expectation that all pupils will gain a deep understanding of the Maths they are learning. They will understand and remember the knowledge, concepts and procedures appropriate for their starting point. For understanding in Maths to be secure, learning needs to be built on solid foundations. A mastery approach to the curriculum means pupils spend longer on mathematical concepts and teaching will happen in blocks. Long term gaps in learning are prevented through speedy teacher intervention and those children who grasp the concepts more quickly are given opportunities to deepen their knowledge and improve their reasoning skills rather than accelerating on to new curriculum content.

1.3. The curriculum we provide aims to ensure that all pupils:

- Have a **fluency** in the fundamental of mathematics, where conceptual understandings are secure and children have the ability to recall and apply knowledge rapidly and with accuracy.

- Can **reason** mathematically, justifying and offering proof using correct mathematical vocabulary.

- Apply their Mathematics knowledge to **problems** with an increasing sophistication coupled with a development of perseverance.

2. Cross-curricular

2.1. Mathematics is not a stand-alone subject and this is reflected at Our Lady's where we endeavour to make cross-curricular links with subjects such as Science, Geography and Art. Links with these subjects provide our children with a context for their Mathematics and can form rich evidence, which is used for assessment.

2.2. In our commitment to improve children's reasoning skills, English plays an important role in Mathematics. Our children are encouraged to use speaking and listening as a tool to reason. To discover, debate and discuss. Mathematics and the written word should be used to effectively communicate meaning. Children are expected to understand mathematical vocabulary consistent with their word and spelling knowledge.

3. Classroom environment

3.1. We believe children need to be immersed in number throughout their journey at Our Lady's and a rich learning environment is paramount. All classes will have a Mathematics area that both celebrates mathematics work and supports learning. Learning Walls will give a flavour of the work being undertaken at any given time.

3.2. Children will be taught to access resources independently. The storage and display of resources will facilitate pupil independence.

3.3. At the heart of Mathematics teaching is imagery. In our classes, there are diverse and rich resources designed to assist our children with their learning. These resources are clearly organised and readily available in all Mathematics learning opportunities.

3.4. In class children will have access to a selection of the following:

1. Base 10 (Dienes)
2. Numicon
3. A variety of number lines
4. A variety of dice
5. A bead bar and bead strings
6. Rulers
7. Coins
8. Number squares
9. Place value grids/fans/arrow cards
10. Cuisenaire
11. Sorting objects
12. Calculators

In addition to this, there is also a central store of resources for specific areas of Mathematics including Measure, Time and Shape and Space.

4. Timetable and coverage

4.1. Mathematics is a core subject in children's learning and this is reflected in its coverage. Typically, children should have opportunities for learning Mathematics daily. The majority of Mathematics teaching will occur in daily Mathematics lessons. In addition, Mathematics will be taught through daily number and arithmetic. Children will work independently, in small groups or as part of a guided session.

5. Intervention

5.1. It is the expectation that the majority of children will progress in line with their relevant programmes of study. However, the decision to move children on will always be decided by the security of children's understanding and their readiness to progress to the next stage. Children who are not secure at age related expectations will receive differentiated work and extra support. Where possible, well targeted intervention programmes will be delivered to consolidate children's understanding and deal with misconception in the fundamentals of number.

5.2. Pupils who are secure in the concepts outlined in their relevant programme of study will be challenged through rich and sophisticated greater depth problems before acceleration onto new content.

6. Planning

6.1. Class teachers are responsible for planning that meets the needs of all learners. Planning gives clear objectives and can include details of specific activities designed to meet the objectives. To ensure effective assessment for learning, planning is completed daily with next steps identified after each lesson. Elicitation and assessment tasks are identified and used to show a clear sequence of learning. Planning follows the Our Lady's template but is flexibly in order to suit the individual teacher's pedagogy.

6.2. Teachers at Our Lady's follow the curriculum overview for their year group. Mathematical units are taught in blocks to ensure enough time is spent on concepts and vocabulary. The objectives for each block are taking from the National Curriculum (Development Matters/EY Outcomes in EYFS) to form Medium Term Plans. Medium term planning offers an outline of the Mathematics journey for a term. Medium term plans are a working document and as such can be revised depending on the progress of children. Medium term planning will be informed by on-going assessment for learning and analysis of end of term assessments.

6.3. Mathematics planning is kept electronically and in individual class teacher files.

7. Arithmetic

7.1. At Our Lady's the expectation is that, our children will have a secure understanding of number. Alongside Mathematic lessons, daily number will be taught and regular arithmetic tests completed in each year group. In Early Years, the expectations of number will be set through our own Our Lady's Early Number Expectations.

8. Calculation strategies

8.1. As well as an expectation of mental fluency, children will also be expected to learn a variety of written methods of calculation. For a detailed breakdown of strategies taught, please refer to Our Lady's Calculations Policy.

9. Assessment

9.1. Please refer to the school's Assessment Policy for a detailed overview of marking and assessment in Mathematics at Our Lady's.

10. Role of subject leader

10.1. The Subject Leader is responsible for improving the standards of teaching and learning in Mathematics. The Subject Leader will:

- ✓ Provide Continuing Professional Development (CPD)
- ✓ Seek advice from external consultants where necessary
- ✓ Keep the Leadership Team informed of curriculum needs and developments
- ✓ Purchase and organise resources for both teachers and children
- ✓ Ensure teacher records are kept up to date
- ✓ Analysis assessment data
- ✓ Take the lead in policy developments
- ✓ Provide guidance and help for all staff
- ✓ Keep up to date with recent developments in the teaching of Mathematics
- ✓ Regularly monitor the teaching and learning of Mathematics across the school

EQUALITY AND DIVERSITY

This policy has been written and reviewed with due regard to the legal duties set out in the Equality Act 2010, to ensure that no member of our school community suffers discrimination or disadvantage regardless of age, race, gender reassignment, disability, civil partnership, religion and belief (or lack of belief), pregnancy and maternity, gender or sexual orientation.