

Policy Connections

The policy should be read in conjunction with the Supplementary Guidance for Curriculum Policies (covering Philosophy & Ethos; Audience; Monitoring and Evaluation; Assessment, Recording & Reporting and Supporting Learning Beyond the School) and Schemes of Work for Mathematics.

Aims and Purpose of Study

Mathematics at The Loyne Specialist School is a core subject and a tool for everyday life. It is a whole network of concepts and relationships which provide a way of viewing and making sense of the world. It is used to analyse and communicate information and ideas and to tackle a range of practical tasks and real life problems.

Using the Programmes of Study for mathematics from the National Curriculum it is our aim:

1. To enhance pupils' awareness of events and actions.
2. To recognise changes in pattern, quantity and space in their immediate environment and in the wider world.
3. To develop an understanding of mathematics through a process of enquiry and experiment.
4. To develop competence and confidence in mathematical knowledge, concepts and skills.
5. To enable pupils to use their awareness and developing understanding of pattern, space, shape and number.
6. To develop pupils' ability to use and apply mathematics across the curriculum and in real life. Assisting pupils to contribute to making choices, taking decisions and gaining control over their immediate environment.
7. To extend pupils' mathematical skills, experiences and understanding to allow them to visualise, compare and estimate. For some pupils this will be achieved in abstract as well as concrete contexts.
8. To aid pupils to think about the strategies they use and explain them to others.
9. To develop initiative and an ability to work independently and in cooperation with others.
10. To **solve problems** by applying their mathematics

These aims are consistent with our school philosophy and take account of Lancashire Local Authority guidance and National Curriculum Statutory guidance.

Mathematics comprises of different programmes of study for each Key Stage, outlined below. The statutory requirements for each Key Stage are outlined below. The Curriculum Organisation Policy requires staff to modify the programmes of study to give all pupils relevant and appropriately challenging work at each Key Stage.

'The expectation is that the majority of pupils will move through the programmes of study at broadly the same pace. However, decisions about when to progress should always be based on the security of pupils' understanding and their readiness to progress to the next stage. Pupils who grasp concepts rapidly should be challenged through being offered rich

and sophisticated problems before any acceleration through new content. Those who are not sufficiently fluent with earlier material should consolidate their understanding, including through additional practice, before moving on ('The National Curriculum in England' September 2013).

At the Loyne Specialist School due to the way most of our pupils learn we find it more effective to teach key skills in discrete and structured learning opportunities, delivered in Personalised Learning Outcome Time (PLOT). Teaching within dedicated Maths lessons should ensure skills in each area of Maths are developed, as well as ensuring that appropriate connections are made between these areas. Each Programme of Study is differentiated to allow all our pupils to access the content in a meaningful and realistic way. Due to mathematics being progressive learning objectives will be used from the 'National Curriculum programmes of study' tracking back to earlier years and 'Towards the National Curriculum for Mathematics' as appropriate. These are taught using age appropriate resources and activities. Further details of this can be found in the Schemes of Work for each Key Stage. Please see attached medium planning grids for each Key Stage to ensure there is breadth and all aspects are included.

Pupils are class taught in EYFS and KS1-4, and are grouped in ability cohorts at KS5.

Key Stage 1 ('The National Curriculum in England' September 2013 Year 1 and 2 mathematics), **Key Stage 2** (The National Curriculum in England' September 2013 Year 2 mathematics), **Key Stages 3 and 4** (The National Curriculum in England' September 2013 Years 3 and 4 mathematics)

The principal focus of mathematics teaching in key stage 1 is to ensure that pupils develop confidence and mental fluency with whole numbers, counting and place value. (The National Curriculum in England' September 2013)

There are four areas of study:

- **Number**
 - Number and place value
 - Addition and subtraction
 - Multiplication and division
 - Fractions
- **Measurement**
 - This includes length, height, mass/weight, capacity, volume, time and money, temperature (introduced in Key Stage 2), perimeter/area (introduced in Key Stage 3).
- **Geometry**
 - Properties of shapes
 - Position and direction
- **Statistics** (introduced in year 2)

Throughout the school through careful planning and preparation we aim to ensure that pupils are given opportunity for:

- Applying Maths knowledge and strategies to real world situations including functional life skills
- Practical activities and games
- Problem solving
- Developing maths skills via learning outside the classroom (LOtC).
- Individual, small group and whole class activities
- Open and closed tasks
- A range of methods of calculating e.g. mental, practical, pencil and paper and calculators
- Appropriate use of computers to support mathematical learning

Scheme of Work

The Loyne Specialist School Scheme of Work for Mathematics is based on 'The National Curriculum in England – programmes of study for Mathematics' September 2013. The range of work for Key Stages 1-4 is taken from the NC from year 1 to year 4, to ensure breadth and progression, but adapted to facilitate appropriate teaching and learning opportunities for pupils with learning difficulties.

The mapping document outlines units of work for each term in each Key Stage. In KS1 and 2 teaching experiences are linked to that term's overall topic. In KS3 & 4 the units of work are delivered under an overarching functional area, allowing the application of Maths skills within everyday situations e.g. food preparation.

Method of delivery

The curriculum organisation and structure is outlined in the policy document entitled 'Curriculum and School Organisation'. The procedures for planning, teaching and learning strategies, monitoring and evaluation are outlined therein. It is accepted that some pupils do not access all lessons owing to their personal timetable, taking into account inclusion and therapy sessions.

In relation to Mathematics, however, additional considerations apply as outlined below:

Early Years Foundation Stage (EYFS)

Pupils in the Early Years Foundation Stage (EYFS) follow the educational programmes outlined in the framework for the EYFS. The strands personal, social, emotional development and mathematics will give opportunities to play and explore and learn in an active and creative way. The document 'Development Matters' will be used to support the planning and assessment of activities. These opportunities will provide broad and balanced experiences that will prepare pupils for the KS1 Numeracy curriculum.

Key stages 1, 2, 3 and 4

Mathematics is planned and delivered as outlined in the schemes of work for the subject/planning for mathematics, and as practical and appropriate elements within the wider curriculum areas, ensuring progression. Teachers plan blocks of work according to the termly allocation of areas, linked to the topic, specified in the mapping for mathematics, taking into account the abilities and needs of the pupils in the class. The maths medium term planning grids for each Key Stage within the Scheme of Work (see attached forms) enables teachers to maintain the correct balance of lessons over the whole term, and also ensures breadth. The time allocation is 2 hours per week taught through 2 lessons for enriching functional maths activities as part of a broad curriculum. An additional 2 ½ hours per week will be focused on a skills based approach linked to personalised learning outcomes through PLOT. The short term planning specifies the focus for each lesson.

Further Education

Most students continue to develop numeracy skills through ASDAN Bronze and Silver modules appropriate to their cognitive understanding, alongside Entry Level descriptors, as outlined in the schemes of work for FE. Further work is carried out across the curriculum.

Updated by: Jemma Nicholson
Updated: September 2017
To be reviewed: September 2021

Bibliography

- The national curriculum in England: Key stages 1 and 2 framework document (**September 2013**) This document is also available to download from www.gov.uk/dfenationalcurriculum.
- The National Numeracy Strategy. Towards the National Curriculum for Mathematics: example of what pupils with special educational needs should be able to do at each P level. **DfES** (2001)
- Planning, teaching and assessing the curriculum for pupils with learning difficulties: Mathematics. QCA (2001)