



Policy for Mathematics

Aims

At Leyburn Community Primary School, we aim to offer pupils a rich and enjoyable experience in mathematics by providing the knowledge, skills, concepts and processes that are appropriate to each individual and that relate to the world around them. This provision should enable them to:

- Develop a positive and confident attitude towards mathematics and to achieve their full mathematical potential.
- Develop logical thinking, enquiring minds and an ability to record in a systematic way.
- Use mathematics to interpret, predict, explain and solve problems involving as much practical experience as possible.
- Develop the correct mathematical vocabulary and other skills necessary to express their thinking and strategies in an appropriate manner.
- Develop their ability to work independently and collaboratively, as appropriate.
- Use technology within mathematics lessons and in the development of their mathematical concepts.
- Use and apply their mathematical knowledge by making appropriate choices in real-life situations.

Guidelines

To ensure that there is continuity and progression in maths throughout the school in line with the guidance from National Curriculum and Big Maths planning folder.

To recognise that mathematics is a body of knowledge and children should be encouraged to remember vocabulary, notations, conventions and results, leading to them developing the skill of rapid recall.

To develop skills in the correct use of equipment such as calculators, rulers, compasses, protractors etc. and to recognise when the use of such equipment is appropriate and encourage the children to use the correct equipment.

To make explicit links between real life problems, as this will develop an understanding of mathematical concepts. To recognise that mathematics is a life skill and to ensure that real life contexts are used as frequently as possible.

To develop cross-curricular links, by using pupils' mathematical understanding, skills and strategies in other subject areas whenever this is appropriate. Look for opportunities to implement maths across the curriculum.

To develop strategies and skills e.g. decision making, estimating, approximating, linking to previous work, simplifying tasks, reasoning, testing hypotheses and good working habits.

To use technology to develop knowledge of mathematical concepts wherever it is felt to be appropriate.

Planning

Our maths teaching is based on the National Curriculum Programmes of Study for 2014. Core Skills are taught following the Big Maths calculation strategy which provides:

- Progress Drivers providing a detailed sequence of progression
- An overview of the development of a calculation strategy
- Planning notes for each of the individual steps.

The 3 key aims of the new maths curriculum (fluency, reasoning and problem solving) are implicit in the approach to every area and are explicit in the development of vocabulary, skills of problem solving and reasoning.

Continuity and progression of core skills are ensured through the whole school approach provided by using Big Maths.

Long and medium term planning are based on the yearly expectations set out in the new national curriculum through the use of White Rose Maths Hub planning, our calculation policy and the Big Maths calculation folder.

Short-term plans are derived from the CLIC Progress Drives for each of the mental and oral starters as well as the teaching of calculation. The challenge/extension part of the lesson uses the ideas from the calculation part of the CLIC, problem solving and reasoning activities, games or investigations to extend the more able, to incorporate the aims of the national curriculum. These plans also include revisits later in the day/next day to support misconceptions (through the distance marking sheet).

Teaching and Learning

Quality intervention is provided by teaching staff using feedback from marking and identifying any gaps that need plugging immediately.

The school follows our own calculation policy. This illustrates progression and outlines the methods to be taught.

A variety of teaching strategies, such as collaborative, group, paired, individual are used to support the children's learning.

A variety resources, especially Numicon and base ten equipment, are used to support the children's learning.

Direct teaching is used in guided group situations to support the learning needs of different groups of children and ensure misconceptions are identified and corrected.

Individual work, to encourage the application and practise of new skills and methods, is a regular feature.

Where available, Teaching Assistants support individuals, pairs or groups of children in various aspects of the lesson.

Discussions and explanations also feature in many lessons, as children will be encouraged to explore their own and others' ideas, as an essential part of the learning process.

Differentiation

The yearly teaching programmes are used to provide appropriate work at levels either 'at or above' or 'below' the chronological age group. The Big Maths calculation policy is in various steps to allow teachers to select the correct Progress Drives for the children in their class.

Differentiation can be by task set, the resources available for a task, the level of support given or, in the case of open-ended investigations, by outcome.

Special Needs and Gifted and Talented

Children with learning difficulties and those who are mathematically able are supported through a differentiated curriculum and are given opportunities to develop skills at an appropriate rate.

Ongoing informal assessment, in the form of targeted questioning, and weekly CLIC and Beat That challenges directly informs the learning objectives set for each individual. As a result, appropriate challenges and opportunities are planned for and delivered.

Children with SEN are assessed through the intervention programmes that have been agreed by the Maths Lead, SEN and class teachers.

The SEND policy gives details of the arrangements for specific support.

Children that are operating above the national expectation will have access to differentiated and challenging work within class.

Assessment – formative and summative

Formative assessment, carried out by the class teacher, is an integral part of their role and is used on a daily/weekly basis to inform future planning. It involves identifying children's progress against the learning challenges set for the lesson and noted on the distant marking sheets. Weekly CLIC and Learn Its challenges help assess Core Skills and to inform next steps. Assessments are made through questioning, marking, observation, discussion and note-taking. These assessments are used to determine what a child has already achieved and to identify their next stage of learning.

Year 2 and 6 will undertake summative assessment in line with national requirements.

Homework

The progress drives the children follow in Big Maths are also shared with parents at home, so they can discuss with their child the methods that are used. Weekly 'Learn-Its' are set as homework through-out the school; in addition to any other homework set.

Monitoring

Monitoring of the planning, teaching and assessment of maths occurs at various times in the year to fit in with the School Development Plan, through the collection of assessment data, book and planning scrutiny, pupil interviews and observations. Next steps are then identified and support put in place to meet these next steps. This means then that monitoring can always be focused on these areas for development. Data analysis monitoring occurs once each term and is then presented to the Governors.

Staff Development

Continuing Professional Development needs are identified by individual members of staff and by the Senior Leadership Team. Staff are encouraged to continue to update and extend their personal knowledge and understanding of mathematics on a regular basis. These are addressed in Staff Meetings, school-based training and individuals working with the Maths Lead.

Equal Opportunities

These comply with our whole school policy.

Assessment, Recording and Reporting

These comply with our whole school policy.

Reviewed: July 2016