



Mathematics Policy 2021-22

Intent

Mathematics is important in everyday life. It is a way of communicating, being used to describe, to illustrate, to interpret, to predict and to explain. It is a creative subject in which pupils have the chance to explore for themselves, and to create beautiful and elegant objects, patterns and arguments. It develops the essential numerical skills that enable pupils to understand and communicate with the modern technological world, the ability to think in abstract ways and solve problems. Different cultures have contributed to the development and application of mathematics and the subject transcends cultural boundaries. Mathematics provides the chance to prove beyond doubt, using logical argument. Mathematics is integral to all aspects of life and with this in mind we endeavour to ensure that children develop a healthy and enthusiastic attitude towards mathematics that will stay with them.

At Stepping Stones we ensure all pupils:

- develop a positive, growth mindset attitude to mathematics as an interesting and attractive subject in which all children gain success and pleasure;
- develop mathematical understanding through systematic direct teaching of appropriate learning objectives;
- encourage the effective use of mathematics as a tool in a wide range of activities within school and, subsequently, adult life;
- develop an ability in the children to express themselves fluently, to talk about the subject with assurance, using correct mathematical language and vocabulary;
- develop an appreciation of relationships within mathematics;
- develop ability to think clearly and logically with independence of thought and flexibility of mind;
- develop an appreciation of creative aspects of mathematics and awareness of its aesthetic appeal;
- develop mathematical skills and knowledge and quick recall of basic facts

Implementation

Our implementation is developed through secure understanding of the curriculum and subject area.

Teaching and Learning, Content and Sequence

At Stepping Stones we teach mathematics through units of work, in line with National Curriculum 2014. We follow the structure of the White Rose Maths scheme to plan these units, alongside the Key Learning in Mathematics documents and Lancashire Mathematics Planning Support.

There is a mathematics lesson every day. There are additional focused mathematics activities in our KS1 classes within continuous provision. Rapid catch up programmes e.g. Rapid Maths, On Track Maths, are used for accelerated progress in children who are working significantly below age related expectations. At Stepping Stones we plan cross curricular opportunities; linking Mathematics with other areas of the curriculum. See Appendix 1 for further information.

The school uses a variety of teaching styles to cater for the different learning needs of pupils in mathematics lessons. Our principle aim is to develop children's knowledge, skills and understanding in mathematics.

Usually the class will be working on the same unit, allowing the teacher to work with the whole class, with groups of pupils and, at times, to individual pupils. Mostly pupils will work in groups, but at times teachers will group the pupils differently in order to enable different pupils to work together. Mathematics teaching is differentiated in order to meet individual pupil's needs and abilities; with a range of resources in order to ensure different learning styles are catered for. Pupils are challenged and taken beyond their abilities each session, in order to ensure our pupils make both appropriate progress and are able to complete any gaps in their learning during their time at Stepping Stones.

Each session will include modelling of the learning and opportunities for pupils to practise and apply their new skills. The children have the opportunity to use a wide range of resources such as number lines, number squares, digit cards and small apparatus to support their work. Children use ICT in mathematics lessons where it will enhance their learning, as in modelling ideas and methods.

At Stepping Stones we plan opportunities for the children to develop their mental and written calculation skills. We have a calculations policy (see Appendix 2) to provide guidance for planning these opportunities, however we recognise there must be flexibility with this policy due to the nature of our school. The children who attend our school come from a wide range of mainstream schools. When the children join our school, teachers will discuss what calculation strategies the children have used and will use this information to inform lesson planning.

In all classes there are children of differing mathematical ability. We recognise this fact and At Stepping Stones School (PRU), we believe that we can be flexible with timings and the structure of each lesson. We use a wide mix of games, puzzles, investigations as well as other resources. In each unit of work every pupil should experience Mathematics through the full mix of approaches.

Leadership, Assessment and Feedback

At Stepping Stones we recognise that AfL lies at the heart of promoting learning and in raising standards of attainment. We further recognise that effective AfL depends crucially on actually using the information gained.

The school supports teacher assessment through the use of the Lancashire Learning and Progression Steps. These documents set out a progression of learning for individual strands of the National Curriculum towards end of year age related expectations.

The assessment procedures within our school encompass:

- Making ongoing assessments and responding appropriately to pupils during 'day-to-day' teaching. These 'immediate' responses are mainly verbal and are not normally recorded;
- Adjusting planning and teaching within units in response to pupils' performance;
- Use of ongoing teacher assessment in order to identify gaps in attainment and at the end of each full term using this information to inform each pupil's assessment data (using KLIP's or PIVAT's);
- Use of information gained from internal school tests (PUMA assessments). Information gained is used alongside teacher assessment to identify an individual's strengths and areas for improvement in order to set appropriate IEP targets.

We recognise the importance of responding to children's work, whether orally or in writing through marking. We seek to encourage children by acknowledging positive achievements. This could include praise for use of a viable method even if the end results were incorrect. Children are frequently provided with next steps to support and enhance their understanding and make links between previous and future learning. Children are given opportunities, and actively encouraged, to explain their work to others and to display their work when it seems appropriate. They are encouraged to value and respect the work of others.

Monitoring of the standards of children's work and of quality of teaching in mathematics is the responsibility of the headteacher and link governor supported by the subject leader. The work of the subject leader also involves supporting colleagues in the teaching of mathematics, being informed about current developments in the subject, and providing a strategic lead and direction for the subject in the school.

Impact

The impact of Stepping Stones' mathematics curriculum is that children understand the relevance and importance of what they are learning in relation to real world concepts. Our children know that maths is a vital life skill that they will rely on in many areas of their daily life.

Children at Stepping Stones have a positive view of maths due to learning in an environment where maths is promoted as being an exciting and enjoyable subject in which they can investigate and ask questions; they know that it is OK to be 'wrong' and that this can strengthen their learning because the journey to finding an answer is most important. The children are confident to 'have a go' and choose the equipment they need to help them to learn along with the strategies they think are best suited to each problem.

Children at Stepping Stones have a good understanding of their strengths and targets for development in maths and what they need to do to improve. Maths books evidence work where the range of activities demonstrate good coverage of fluency, reasoning and problem solving. Activities chosen show that mathematical concepts or skills have been mastered when a child can show it in multiple ways, using the mathematical language to explain their ideas, and can independently apply the concept to new problems in unfamiliar situations.

Early Years Foundation Stage

Work undertaken within the Early Years Foundation Stage is guided by the requirements and recommendations set out in the Revised Statutory Framework for the EYFS (2017), the Development Matters in the EYFS (2012) and the Lancashire Planning Support Tools. We give all the children ample opportunity to develop their understanding of mathematics. We aim to do this through varied activities that allow them to use, enjoy, explore, practise and talk confidently about mathematics.

SEN/Inclusion and the Mathematics Curriculum

All the Mathematics we work on shows positive images of the various groups in society. We seek to celebrate the mathematical heritage of all the cultures in the school and to recognise that the Mathematics we do comes from all over the world.

All children should have equal access to the curriculum, irrespective of particular circumstances such as race, background, gender and capability. In the daily mathematics lesson we ensure this by supporting children in a variety of ways: E.g. repeating instructions, emphasising key words, using picture cues.

In line with the school policy on Special Educational Needs, the SEN co-ordinator, Mathematics co-ordinator and the class teacher will be involved in ensuring that pupils will have work planned to meet their needs. Classroom assistants will also provide additional support. Those pupils with significant needs in mathematics will have specific mathematical targets set when we produce their IEPs. We have a high expectation of progress that we expect from our children regardless of their BSE needs and this is reflected in the accelerated progress we support our children in making.

This policy should be read in conjunction with:
Curriculum Policy
Teaching and Learning Policy
Assessment Policy
Inclusion Policy

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Policy Review Date: January 2023 or earlier if required