



Christ Church Primary School Mathematics Policy



This policy document is a statement of the intent, implementation and impact of the teaching and learning of mathematics at Christ Church Primary School.

Our Intent

At Christ Church Primary School we want all children to develop into confident, quick and competent mathematical thinkers and to be able to apply their mathematical knowledge in a range of challenging and stimulating situations. Our aim is that all children develop a positive and confident attitude to mathematics, enjoy mathematics and reach their full potential as mathematicians.

Aims

In order to achieve this goal we aim in our teaching to:

- Make mathematics enjoyable, worthwhile, meaningful, and a relevant experience for all of our pupils.
- Set appropriately high expectations for all our pupils.
- Promote confidence and competence with numbers and the number system.
- Develop children's ability to solve problems in a variety of situations.
- Develop children's ability to communicate using appropriate mathematical language.
- Develop children's understanding and awareness of mathematics through a cross curricular approach.
- Help children to understand the importance of mathematics in everyday life.
- Develop children's ability to assess their own learning in mathematics and to identify their own strengths and areas for further development.
- Establish a positive and supportive mathematical environment within the classroom.

Implementation

Teaching Mathematics

Mathematics lessons are well structured, lively, appropriately scaffolded and adapted in order to meet the needs of all learners, and delivered at a good pace. Lessons are coherently planned in a structured sequence which draws upon children's prior knowledge, allowing them to recall then deepen their understanding of mathematical concepts.

They will include opportunities for:

- Directed teaching included modelling, explanation and illustration of mathematical ideas.
- A balance of individual, paired and group work.
- Children to use a range of high quality concrete, pictorial and abstract mathematics resources.
- Links to be made between mathematics and other curriculum areas.
- Children to discuss their work and demonstrate and explain their methods and reasoning.

- Practical activities set in meaningful contexts.
- Problem solving and investigative activities.
- Mathematical errors and misconceptions to be dealt with in a positive and supportive environment.
- Children to apply their mathematical knowledge in a variety of challenging and stimulating situations.
- Children to explore mathematics in a variety of learning styles in order to meet the needs of all learners.

Teaching Time

All classes from Year 1 will have a dedicated daily mathematics lesson which will last around 50 minutes in KS1, and 60 minutes in KS2. In the foundation stage (and through the transition into Year 1) there will be a daily teacher input alongside opportunities for daily mathematical activities as part of all areas of learning. This may take the form of a focused adult led task or a child-initiated activity. All children will engage in an adult-led activity each week linking to their Maths focus for the week. Links will also be made to mathematics within other curriculum areas to enable pupils to develop and apply their mathematical skills.

Class Organisation

- In Reception all children will have a daily mathematics input from their class teacher to ensure children are exposed to all learning.
- In Years 1-6 children will be taught in mixed ability groups and these will be fluid across the year. The groups will change over the year so that all children have been taught by both teachers allowing for a moderated judgement on each child's attainment and the impact of learning.
- Small intervention groups will also be used to address concerns a class teacher may have over individual/groups of children. This will be delivered by specified teaching staff but it will be the class teacher's responsibility to direct the support/intervention. The impact of this intervention will be measured by children's ability to apply skills taught and children's attainment in mathematics.

Lesson Structure

Lessons will respond to the needs of all learners. While some may follow a traditional oral / mental starter; main activity; plenary, others will begin with, e.g. groups beginning on scaffolded tasks while the class teacher/TA works with those needing support/challenge. There then may be some larger group input on consolidation or new learning.

Basic skills – Each lesson will begin with a short 10-minute basic skills session. This daily dedicated time will provide opportunities to rehearse, reinforce, sharpen and develop mental strategies and oral skills. In KS1 there will be a focus on the understanding of number; this involves (as stated in The National Curriculum 2014) 'working with numerals, words and the four operations, including with practical resources [for example, concrete objects and measuring tools].' In KS2 there will be a heavier focus on the four operations and times tables with a mixture of written and practical

activities taking place in this time. Teachers will also use this time to address misconceptions and embed children's understanding of methods and problem solving.

There will be a focus on communication and discussion, as a class, in small groups and in pairs, alongside individual learning of the four operations and multiplication tables.

Main teaching activity – this will include specific teaching input and pupil activities. There will be a balance between whole class, grouped, paired and individual work. There will also be a balance between teaching and learning styles employed. All children are offered the opportunity to tackle 'super challenges' during the lesson, to move their learning on even further. Children are encouraged to take increasing independence over these. In all lessons, children will have opportunity to reason/problem solve and this may be evident in books or through whole class discussion in KS1.

Plenary – this will provide opportunities for working with the whole class to identify and rectify misconceptions and errors, to identify progress made including pupil self-assessment, summarise key facts, make links to other work and to discuss next steps. The plenary or mini plenaries may, however, take place during the lesson rather than at the end, depending on the progress of the learners at any point in the lesson.

Progression

The emphasis on pupils' learning begins with mental strategies, leading to informal jottings to support mental calculations and then to formal representations, providing children with the ability and understanding to use and apply mathematical knowledge in a range of situations, as directed for each year group in the 2014 National Curriculum.

Planning

Mathematics is a core subject in the 2014 National Curriculum and is used as the basis for implementing the statutory requirements of the programmes of study for mathematics. Teaching staff follow our bespoke Christ Church long-term plans to sequence learning and use the skills from the National Curriculum to break down learning further. Short term planning takes into consideration the needs of individuals in the teaching group. These plans outline specific learning objectives to be taught, and highlight the adapted activities and steps to success.

The Foundation Stage

In the Foundation Stage we plan mathematical activities that address the learning objectives for mathematics as set out in the Early Years Foundation Stage document. Through indoor and outdoor provision, we ensure opportunities for children to develop their understanding of number, measurement, pattern, shape and space are carried out through a variety of activities, both child and teacher initiated. These allow them to enjoy, explore, practise and talk confidently about mathematics.

Cross Curricular Links

Mathematics can contribute towards many subjects within the primary curriculum and opportunities are sought to draw mathematical experience out of a wide range of activities. This provides opportunities for children to begin to use and apply their mathematics in real contexts.

ICT/Computing

ICT is used in various ways to support teaching and learning in mathematics. ICT aspects will involve laptops, iPads, interactive whiteboards and other audio-visual aids. There are numerous mathematical programs available on the network and individual classroom computers.

Resources

There are a range of resources available to support teaching and learning in mathematics across the school. Each class has a selection of mathematical resources and apparatus that are used on a regular basis. In the Foundation Stage and Key Stage 1, each class has an additional range of relevant resources. A wide range of resources is also stored centrally in the mathematics area. These resources are clearly labelled and are available for use by all classes. There is a range of software available on the network (Staff drive).

Times Table Rockstars

TTRS is used in KS2 at Christ Church with the intention of engaging and motivating the children when learning their times tables. Children's performance is tracked via the stats add on and their achievements on TTRS are celebrated at school during worship. The impact of this is measured via the stats add on (total engagement and progress of knowledge and speed) and is monitored regularly. Children also have access to this at home.

Impact

Assessment and Recording

Assessment takes place at three connected levels: short-term, medium-term and long-term. These assessments are used to inform teaching and learning in a continuous cycle of planning, teaching and assessment/reflection.

Short-term

Informal assessments take place in every lesson and are closely matched to the teaching objectives from the 2014 National Curriculum. Plans are annotated and adjusted based on these assessments. Future lessons within each unit are informed by continuous assessment. Pupil self-assessment is also used to inform future teaching and learning. Class teachers monitor the impact that the teaching is having upon children's progress and adapts the progression of lessons in order to meet these needs. They will highlight children who need further/support within mathematics.

Medium-term

Assessment data is entered on a termly basis and tracks the progress of each individual child against the teaching objectives from the 2014 National Curriculum. The trackers highlight the gaps in learning and are therefore used to inform future planning.

We hold termly 'Pupil Progress Meetings' where the progress of each individual is discussed between the class teacher and members of the SLT. During this meeting interventions are planned, where appropriate, to ensure all children meet or exceed their targets. The impact of interventions which are already in place are also discussed and decisions are made whether these need to continue or not.

Long-term

Takes place towards the end of the academic year. National tests are used for children in Reception, Year 4 and 6. Assessment in the foundation stage is carried out through the statutory foundation stage profile at the end of the academic year.

Wristbands

Children's understanding of times tables is monitored via their wristband achievements (alongside assessment data and TTRS). In Years 2-6 (and Summer term in Year 1) children work towards bronze, silver, gold and diamond wristbands based upon relevant multiplication/division facts to each year group. These are timed weekly times table test and are monitored by class teachers. Teachers identify children who are not making expected progress and support/intervention is planned.

Equal Opportunities

Christ Church Primary School is committed to working towards equality of opportunity in all aspects of school life. Our aim is to offer all of our pupils a mathematics curriculum that is relevant and adapted to all pupils' needs and abilities, so that every child may reach their full potential.

Special Educational Needs

We aim to include all pupils in the daily mathematics lesson. All staff are aware of and take into account the provision for children with special educational needs including those with dyslexic tendencies. We adapt and scaffold learning opportunities to include both children who have learning difficulties and require additional support and those who are very able and require further challenge.

A range of teaching and learning styles are also employed to better meet the needs of all learners. We provide learning opportunities that are closely matched to the needs of individual children, taking into account the targets set for them through Provision Mapping or their Individual Education Plans. This is co-ordinated by the AHT for Inclusion and SENCo, and is devised as to address specific gaps in individual children's mathematical knowledge and understanding.

Reviewed

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