



Living by our Christian Values of

Peace
Trust
Love
Hope
Friendship



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Mathematics Policy

St Edward's CE Primary School

Approved by:	Governors	Date:	3 rd November 2016
Committee:	Curriculum and Standards	Co-ordinator:	Matthew Halstead
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Rationale:

At St Edward's CE Primary we aim to inspire all children to reach their full academic potential. In mathematics this means ensuring a curriculum that is meaningful, contextual and fully inclusive of all children which:

- Develops children's knowledge and understanding of Mathematical concepts whilst enabling them to practice and hone skills and methods;
- Enables them to think critically and communicate their understanding;
- Gives them opportunities to apply learnt mathematical skills in different contexts across the curriculum.
- Provides opportunities to develop problem solving skills useful for maths and across the curriculum.
- Gives them opportunities to develop their reasoning skills.

Curriculum aims

This policy is set within the context of the school's vision, aims and policy on teaching and learning. As a result of their learning in mathematics and problem solving across the curriculum children will:



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- Be prepared for applying their skills effectively in everyday life situations, in their future learning and in the work place.
- Have the building blocks in place and to provide a solid foundation to lead onto secondary, further and higher education.

Through teaching with a problem solving approach, children will learn to understand, distil and clarify information; consider what they know that will help them to solve problems, realizing what they need to know next; create systems and strategies, organizing information in a way that helps find patterns and ultimately solutions and to communicate and present their findings effectively.

Planning

- Planning begins from a thorough understanding of children's needs gleaned through effective and rigorous assessment and tracking, combined with high expectations and ambition for all children to achieve.
- Medium term planning will outline the areas of mathematics that will be taught during the term to ensure coverage of the National Curriculum.
- Within short term planning, clear success criteria for learning objectives taught should be created – demonstrating the progression needed to reach and exceed the objective. This will enable the class teacher to follow a clear and systematic teaching sequence, where input and activities are differentiated by considering which parts of the success criteria individuals and groups of pupils are ready for.
- Where children are working significantly above or below the objective the majority of the class need to work towards, and where extending this by expanding the success criteria seems inappropriate, objectives from higher or lower age-groups will need to be planned and taught.
- Planning, where possible, should involve real life contexts for maths, where children are problem solving with a purpose in mind.
- There should be a whole class investigation planned at least once per half term to practice different elements of problem solving, including: finding all possibilities, logic problems, finding rules and describing patterns, diagram/visual problems and exploring different aspects of number. During these investigations, there should be a honing in on specific problem solving skills that are transferable to other contexts.

Teaching and Learning

- In the Foundation Stage, children are given the opportunity to develop their understanding of number, measurement, pattern and shape and space through a combination of short, formal teaching as well as a range of planned structured play situations, where there is plenty of scope for exploration.
- Children will become very competent 'counters' so that their fluency with the number system provides a foundation for mathematical understanding. Counting forwards and backwards in many different sized steps as well as from different starting and ending points is essential.
- Maths learning builds from a concrete understanding of concepts where children are manipulating objects. When children are able to see concepts this way, they then need to understand the same concepts represented pictorially. Children are then ready for abstract representation before being able to apply their knowledge to different situations.
- Children should be encouraged at all times to communicate their understanding of maths so that it clarifies their thoughts.



- Children's mental maths is of great importance, with number bonds, times tables facts and various strategies for calculation taught and practiced at school with support sought from parents through homework activities.
- A progression towards efficient written calculations should be developed and applied consistently in each year-group. The school Calculation Policy should be followed.
- Assessment for learning, for example achieved through verbal feedback and marking, should be used to ensure areas where the majority of the class have not grasped a concept can be revisited and mastered.
- Though the nature of lessons will be very different depending on the needs of the class, children should be: active; practicing skills they haven't yet mastered (perhaps recapping on previous objectives); learning something new OR learning to apply their knowledge to different contexts. They should be: 'doing' very quickly; working at a good pace and being productive; sharing their thoughts and methods and being successful.
- When teaching problem solving skills across the curriculum, time should be given to each aspect of problem solving ensuring children get thorough practice at: 'preparing for problem solving', 'thinking through problems to establish what they know and don't know so far'; actually 'doing the problem solving' effectively AND 'communicating the answer effectively'. They should evaluate the process too. Over time children will improve at each aspect.

Assessment, recording and reporting

- Assessment for learning should occur throughout the entire maths lesson, enabling teachers/teaching assistants to adapt their teaching/input to meet the children's needs. This feedback should be incisive and regular.
- On a daily basis children should self-assess against the learning objective and success criteria, giving them a sense of success. Children should know when they are meeting their targets and be self-assessing against those too.
- Pupil's work should be marked in line with the Marking Policy giving children a chance to learn from their misconceptions or incorrect methods.
- Future lesson design should depend on class success evaluated through marking and observations made during the lesson.
- Assessment of pupil work and progress is ongoing by the class teacher and informs future planning. Teachers mark work in mathematics in line with the school marking policy. Teachers use objectives from the 2014 curriculum allowing them to monitor children's progress in mathematics, gathering evidence over the course of the year. Teachers use Educater on a day to day basis to help them to do this. Teachers use this information to inform planning for groups and individual pupils.
- Summative assessments are made at least once per term in order to provide further understanding of the standard a child is working at and to inform a more rounded judgement of their abilities.
- Tracking is used in order that children who are not making good progress over time can be targeted for support in one form or another. What that support will and how intensive, depends upon the child's needs and it may be a simple strategy within whole class teaching that is needed. Where further support is deemed necessary, children can access interventions, explained below.

Assessments are used to:

- To ensure that individual pupils make progress compared with previous attainment
- Assess pupils' work against the key objective for the year



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- Assess pupils' work against national standards at year 2 and 6
- Provide information about children's attainment and progress to assist in reporting to parents
- To assist with planning for progression
- Help us to gain relevant information to set targets and focus on areas of weakness in order to constantly strive for high levels in SATs
- Allow staff and governors the opportunity to see the overall progress and attainment made by the school as a whole, including progress towards school, LA and national targets.

All results are to be reviewed by the class teachers against the pupils' daily work. This will serve to check for anomalies in results.

All Parents receive termly reports on which there is a summary of their child's progress in mathematics and next step targets to help their child at home. Each pupil's achievement is compared against both national and local standards.

Display and Resources

- In the classrooms there should be, either on display or easily accessible to children, level appropriate resources, particularly concrete and pictorial apparatus to support children to grasp concepts.
- Mathematical vocabulary should be displayed so that children use this in the communication of their understanding.
- There should be maths work on display in classrooms and in other areas of the school in order to encourage a positive attitude and enthusiasm towards mathematics for all groups of children

Monitoring and Evaluating

Monitoring of children's progress begins with performance review meetings but continues with the subject leader evaluating further evidence to ensure children are making progress. This monitoring happens through examination of work in books, pupil interviews, analysis of assessment results and the assessments used, and through other means depending on what information needs to be gleaned.

Following monitoring activities feedback is given to staff about how they can strengthen their practice and CPD (professional development) opportunities built in where it would be deemed valuable. These might take the shape of inputs during staff meetings or by a variety of other means.

Equal Opportunities/Special Needs

We ensure that all pupils have equal access to a broad and balanced curriculum regardless of age, gender, race and ability.

All children will participate in mathematics activities. Learning will be differentiated to provide appropriate challenges to specific individuals and groups. Adult support will be used when appropriate and in accordance with other policies such as SEND.



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Where necessary teachers will, in consultation with the SENCO, draw up an Individual Education Plan for a child or children. If a child's needs are particularly severe they will work on an individualised programme written in consultation with the appropriate staff.



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