

St. Clare's Catholic Primary
School
Mathematics Policy



Members of staff responsible: Mr Parkinson
Date policy written: June 2020
Date approved by the full Governing body: June 2020
Date to be reviewed: June 2022

1. MISSION STATEMENT

St Clare's is a Christ-centred family where everyone is valued and respected. We learn and grow, whilst strengthening our relationship with God and one another. Together in His love, we can achieve our full potential.

Play, learn and grow together with Christ

2. AIMS

Mathematics helps children to make sense of the world around them through developing their ability to calculate, to reason and to solve problems. It enables children to understand and appreciate relationships and pattern in both number and space in their everyday lives. Through their growing knowledge and understanding, children learn to appreciate the contribution made by many cultures to the development and application of mathematics.

At St. Clare's Catholic Primary School we aim to:

- develop a positive attitude to mathematics as an interesting and attractive subject in which all children gain some 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

3. STATUTORY REQUIREMENTS

The 2014 National Curriculum for mathematics describes what must be taught in each key stage. The mathematics taught follows these statutory requirements. The methods used reflect the recommendations outlined in the accompanying notes and guidance. Teaching is based on the plans devised by Lancashire's Learning Excellence Mathematics Team. However, it is often necessary to adapt these plans using a range of different resources to meet the varying needs, interests and abilities of all our children.

Our weekly plans list the specific learning objectives for each lesson.

The headteacher and mathematics subject leader are responsible for monitoring the mathematics planning within our school.

The Foundation Stage

Work undertaken within the Foundation Stage is guided by the requirements and recommendations set out in the Early Years Foundation Stage framework and Development Matters.

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.

4. SUBJECT ORGANISATION

The school uses a variety of teaching styles to cater for the different learning styles of pupils in mathematics lessons. Our principle aim is to develop children's knowledge, skills and understanding in mathematics. We do this through a daily lesson that has a high proportion of whole-class and group-direct teaching. During these lessons we encourage children to ask as well as answer mathematical questions. They 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 Computing in mathematics lessons where it will enhance their learning, as in modelling ideas and methods. The school's use of Lancashire's Learning Excellence Mathematics plans, White Rose Scheme, National Centre for Excellence on the Teaching of Mathematics and Maths No Problem ensure Using and Applying in mathematics is integrated into planning and teaching.

In all classes there are children of differing mathematical ability. We recognise this fact and provide suitable learning opportunities for all children by matching the challenge of the task to the ability of the child. We achieve this through a range of strategies – in some lessons through differentiated group work, and in other lessons by organising the children to work in pairs on open-ended problems or games.

We use teaching assistants to provide appropriate support to individuals or to groups of pupils. Teaching assistants within St. Clare's Catholic Primary School are viewed as an important 'asset' to the school and, as such, are appropriately involved in the planning and delivery of the mathematics curriculum. Their knowledge, skills and understanding is updated through involvement in school-based and LA led Inset.

5. Wider Curriculum

Contribution in Mathematics to Teaching in Other Curriculum Areas

English

Mathematics contributes significantly to the teaching of English in our school by actively promoting the skills of reading, writing, speaking and listening. Children are expected to articulate their predictions, methods and reasoning logically and using the correct mathematical vocabulary. They are taught how their use of language often requires precision in mathematics.

Science

Almost every scientific investigation or experiment is likely to require one or more of the mathematical skills of classifying, counting, measuring, calculating, estimating and recording in tables and graphs. In science pupils will for example order numbers, including decimals, calculate simple means and percentages, use negative numbers when taking temperatures, decide whether it is more appropriate to use a line graph or bar chart, and plot, interpret and predict from graphs.

Art, Design and Technology

Measurements are often needed in art and design and technology. Many patterns and constructions are based on spatial ideas and properties of shapes, including symmetry. Designs may need enlarging or reducing, introducing ideas of multiplication and ratio. When food is prepared a great deal of measurement occurs, including working out times and calculating cost; this may not be straightforward if only part of a packet of ingredients has been used.

History, Geography and Religious Education

In history and geography children will collect data by counting and measuring and make use of measurements of many kinds. The study of maps includes the use of co-ordinates and ideas of angle, direction, position, scale and ratio. The pattern of the days of the week, the calendar and recurring annual festivals all have a mathematical basis. For older children historical ideas require understanding of the passage of time, which can be illustrated on a time line, similar to the number line that they already know.

Physical Education and Music

Athletic activities require measurement of height, distance and time, while ideas of counting, time, symmetry, movement, position and direction are used extensively in music, dance, gymnastics and ball games.

Personal, Social and Health Education (PSHE) and Citizenship

Mathematics contributes to the teaching of personal, social and health education, and citizenship. The work that children do outside their normal lessons encourages independent study and helps them to become increasingly responsible for their own learning. The planned activities that children do within the classroom encourage them to work together and respect each other's views.

6. THE USE OF ICT

The effective use of ICT can enhance the teaching and learning of mathematics when used appropriately. When considering its use, we take into account the following points:

- ICT should enhance good mathematics teaching. It should be used in lessons only if it supports good practice in teaching mathematics;
- Any decision about using ICT in a particular lesson or sequence of lessons must be directly related to the teaching and learning objectives for those lessons;
- ICT should be used if the teacher and/or the children can achieve something more effectively with it than without it;

7. ASSESSMENT AND TARGET SETTING

"Assessment for learning is the process of seeking and interpreting evidence for use by learners and their teachers to decide where the learners are in their learning, where they need to get to and how best to get there."

Assessment Reform Group

At St. Clare's Catholic Primary School 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 assessment procedures within our school encompass:

- Making ongoing informal assessments and responding appropriately to pupils during 'day-to-day' teaching. These 'immediate' responses are verbal as well as recorded in the immediate intervention file, which is used by all adults working within the classroom.

- Using knowledge of pupils drawn from ongoing pupil tracking records and with continual reference to key learning and objectives for the relevant year group.
- Adjusting planning and teaching within units in response to pupils' performance;
- Use of information gained from termly tests (both statutory and optional). Analysis is done at both a quantitative and qualitative level. Information gained is used to track the progress and attainment of individual children, groups of children and whole classes. The data is analysed so that mathematical areas of strength and areas for development are highlighted. This enables teachers to amend plans and focus future learning as necessary. The progress achieved by different groups of children, across the school, is also tracked and compared with other groups eg progress and attainment of boys compared to the achievements of the girls; progress of those children with English as an additional language; progress of children with Special Educational Needs or those identified as Gifted and Talented. Children's individual progress is also monitored, using our tracking programme, and discussed at pupil progress meetings. Teachers then use this data to set challenging, yet achievable, targets and ensure appropriate intervention where necessary.
- Results obtained in mathematics at the end of Key Stages One and Two are compared to results achieved nationally and to those of similar primary schools.
- Termly Pupil Progress meetings take place with the Senior Leadership team where targets are set and next steps identified.

8. SPECIAL EDUCATIONAL NEEDS INTERVENTION PROGRAMMES EQUAL OPPORTUNITIES

At St. Clare's Catholic Primary School we aim to provide a broad and balanced education to all pupils. Quality First Teaching is considered an entitlement for all pupils. Effective pupil tracking enables identification of pupils who may benefit from early 'intervention' at an appropriate level.

We also recognise, and aim to make provision for, pupils who have a particular ability in mathematics.

9. ROLE OF SUBJECT LEADER:

There is a designated Computing Co-ordinator to oversee the planning and delivery of computing within the school. The Computing co-ordinator will be responsible for:

- Raising standards in computing as a national curriculum subject
- Facilitating the use of computing across the curriculum in collaboration with all subject co-ordinators
- Advising colleagues about effective teaching strategies, managing equipment and purchasing resources

- Monitoring the delivery of the computing curriculum and reporting to the Head teacher on the current status of the subject

Subject co-ordinators should identify where computing should be used in their subject schemes of work. This might involve the use of short dedicated programs that support specific learning objectives or involve children using a specific application which they have been taught how to use as part of their computing study and are applying those skills within the context of another curriculum subject.

10. PARENTAL INVOLVEMENT

Parents are able to speak to class teachers after school about any advice that they may need in order to support their child at home.

We meet with parents formally three times a year and we send out a report at the end of each term.

We hold termly meet the teacher meetings, to discuss the curriculum for that term as well as produce half termly overviews which highlight the key skills to be studied.

In the Autumn term we hold a maths workshop with the parents where they have the opportunity to gain an understanding of teaching methods and strategies that we use in school.

We have a school website and maths blog which promote the school's achievements as well as providing information and communication between the school, parents and the local community. We also use a school twitter account and app to keep parents up to date.

11. CONCLUSION:

This policy also needs to be in line with other school policies and therefore should be read in conjunction with the following school policies:

- Teaching and Learning Policy
- Assessment and Record Keeping
- Maths Calculations Policy (Addition, Subtraction, Multiplication, Division)
- Mental Maths Calculations Policy
- Responding to pupils' work / Feedback / Marking policy
- Special Educational Needs Policy
- ICT Policy
- Equal Opportunities Policy
- Health and Safety Policy