Mathematics Policy

SACRED HEART R.C PRIMARY SCHOOL MATHEMATICS POLICY

'Suppose one of you wants to build a tower. Won't you first sit down and estimate the cost to see if you have enough money to complete it?'

Luke 14:28

Written By:	**A.Hough**
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Mission Statement

"With Christ as our guide, we inspire and thrive"

Sacred Heart is a Roman Catholic Primary School, which aims to provide a high-quality Catholic education for all children who attend the school. Sacred Heart is committed to working in partnership with the Diocese of Liverpool, the parents of its children and the local community.

Practical Ways in which we attempt to carry out our Mission Statement

Being firm but kind, fair and just

We will endeavour to create an atmosphere of mutual respect in our relationships with every other member of the school. With a consistently positive attitude we will act with fairness to everybody.

Consistency of attitude

We will endeavour to be consistent in our speech and manner to all members of the school, fostering caring, loving attitudes towards everyone, and setting a good example through our relationships with each other.

Developing a sense of belonging

We will endeavour to create a safe and secure environment (emotionally as well as physically) making school a pleasant place to be in. We will encourage the children to feel an important part of the school community by encouraging each person's involvement in class.

Encouraging Co-operation

We will teach the children that ultimately everyone has a choice, a totally free choice, of what one does, but through free choice we must willingly and graciously accept the consequences whether known or not. We will encourage an atmosphere, however, of forgiveness, and being ever hopeful for each person being always ready to make a new 2 beginning. We will set an example by being ready to admit our own mistakes and being able to say sorry to both adults and children.

Positive Relationships

We will endeavour to support and develop firm positive relationships throughout the school, through the example of our behaviour and interactions with others and through teaching about human and divine nature through the R.E. Syllabus.

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Curriculum Statement

INTENT

These days it is common to hear people say they are, 'no good at maths' or state that they, 'can't do maths!" People are far less likely to admit that they can't read or write.

At Sacred Heart, we aim to foster a 'can do' attitude towards maths. If we feel we can't do it, the sentence is always followed with YET! "I can't do it yet!" This makes us believe we will be able to do it, we just haven't quite learnt all the skills we need to solve the problem. This growth mind-set approach towards maths helps us all to achieve more than we believe we can.

- Become fluent in the fundamentals of Mathematics
- Reason mathematically
- Solve problems by applying their Mathematics

We are committed to ensuring that children are able to recognise the importance of Maths in the wider world and that they are also able to use their mathematical skills and knowledge confidently in their lives in a range of different contexts. We want all children to enjoy Mathematics and to experience success in the subject, with the ability to reason mathematically. We are committed to developing children's curiosity about the subject, as well as an appreciation of the beauty and power of Mathematics.

Mathematics is a journey and long-term goal, achieved through exploration, clarification, practise and application over time. At each stage of learning, children should be able to demonstrate a deep, conceptual understanding of the topic and be able to build on this over time.

We know there are 3 levels of learning:

Shallow learning: surface, temporary, often lost

Deep learning: it sticks, can be recalled and used

Deepest learning: can be transferred and applied in different contexts

At Sacred Heart RC Primary, deep and deepest levels are what we are aiming for by teaching maths using the Mastery approach. Mathematics is an essential part of a balanced curriculum that is both well matched and challenging to learner's needs.

IMPLEMENTATION

The content and principles underpinning the 2014 Mathematics curriculum and the Maths curriculum at Sacred Heart aims to reflect those advocated by the Mastery approach found in high-performing education systems internationally. All teachers use the five big ideas of mastery (coherence, representation and structure, mathematical thinking, fluency and variation) within their day to day teaching. These principles and features characterise this approach and convey how our curriculum is implemented.

The school has implemented the White Rose Scheme of Learning, Lesson by Lesson overview– a 'mastery' curriculum approach to the teaching of Mathematics. This ensures

that children can focus for longer on each specific area of Maths and develop a more secure understanding over time. This approach is also designed to enable children to progress to a greater depth of understanding. Subsequent blocks continue to consolidate previous learning so that the children continually practise key skills and can recognise how different aspects of Maths are linked. For example, when children have completed a block which has enabled them to master the multiplication of two-digit numbers, a subsequent block on area and shape might provide opportunities to use this understanding when calculating the area of shapes with 2-digit length and width dimensions. Opportunities within the Corpus Curriculum will also allow the children to apply their Maths understanding in context. In addition to the curriculum approach, teachers facilitate daily 'Maths Meetings' to recap previously taught objectivises including those objectives from the previous year group.

What you will see in our Maths lessons…

At Sacred Heart we use a variety of teaching and learning styles in Mathematics lessons. Our principal 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 in Key Stage 1 and 2. In addition
During these lessons we encourage children to ask as well as answer mathematical questions in which children aim to speak in full sentences. Children at Sacred Heart use a wide range of resources such as egg boxes, base tens, counters, multi-link cubes, number lines, number squares, Numicon and small apparatus to support their work.

Children are given the opportunity to develop fluency, recall facts and recap previous learning through warm ups in which objectives from the previous area of Math's taught are recapped

- Teachers reinforce an expectation that all children can achieve high standards in Mathematics.
- Many children progress through the curriculum content at the same pace. Differentiation is achieved by emphasising deep knowledge and through individual support (scaffolding and questioning) as well as intervention.
- Teaching is underpinned by methodical curriculum design and supported by carefully crafted lessons and resources to foster deep conceptual and procedural knowledge.
- Practise and consolidation play a central role. Carefully designed variation within this builds fluency and understanding of underlying mathematical concepts.
- Teachers use precise questioning in class to test conceptual and procedural knowledge and assess children regularly to identify those requiring intervention, so that all children keep up. In a typical lesson, the teacher leads back and forth interaction, including questioning, short tasks, explanation, demonstration, and discussion. Some new concepts are shared within the context of an initial related problem, which children are able to discuss in partners. This initial problem-solving activity prompts discussion and reasoning, as well as promoting an awareness of maths in relatable real-life contexts that link to other areas of learning. In KS1, these problems are almost always presented with objects (concrete manipulatives) for children to use. Children may also use manipulatives in KS2.
- Teachers use careful questions to draw out children's discussions and their reasoning. The class teacher then leads children through strategies for solving the problem, including those already discussed. Independent work provides the means for all children to develop their fluency further, before progressing to more complex related problems.

Mathematical topics are taught in blocks, to enable the achievement of 'mastery' over time. Each lesson phase provides the means to achieve greater depth, with more able children being offered rich and sophisticated problems, as well as exploratory, investigative tasks, within the lesson as appropriate.

Maths Meetings:

Maths Meetings are a vital part of the Mathematics Mastery programme. Their purpose is to consolidate key areas of mathematics or introduce topics to the children away from the current area of maths being taught. We aim to deliver Maths Meetings three times a week for 15–30 minutes as a whole class intervention. A Maths Meeting covers several curricular areas, broken down into short segments; each segment should take approximately 5 minutes. In KS1, maths meetings should start with a song, rhyme, poem or chant, to ensure full participation and enjoyment.

Maths Meetings aim to:

- Give students repeated practise of basic skills and concepts (fluency, consolidation, mastery of what has been taught).
- Allow the teacher to assess children's prior learning.
- Be a whole-class ritual around the IWB or handout.
- Establish a routine for starting mathematical thinking in the day, building classroom culture, and making connections with mathematics in everyday life.

Maths Meetings expectations:

- 100% of the class must be ready to respond,
- 100% of the class must look at and listen to the teacher.
- Teacher only accepts appropriate responses, including technical vocabulary and full sentences when appropriate.

Mastering Number:

Children at sacred Heart RC Primary School are taking part in Maths Hub (North West Three) Mastering Number project - Supporting pupils in Reception, Year 1 and Year 2 to develop good number sense.

This programme aims to secure firm foundations in the development of good number sense for all children. The aim over time is that children will leave with fluency in calculation and a confidence and flexibility with number. Attention will be given to key knowledge and understanding needed in Reception, and progression through KS1 to support success in the future.

The benefits of the project are:

- Pupils will develop and demonstrate good number sense.
- Develops children's mindset to look for mathematical relationships.
- Build both teachers' and pupils' confidence.
- Collaboration with other teachers.

Each class, in KS1, has a daily 'Mastering Number' session in addition to their daily maths lesson. Over the year, the children will experience using a range of resources and representations, including a small abacus-like piece of equipment called a rekenrek.

IMPACT

The school has a supportive ethos, and our approaches support the children in developing their collaborative and independent skills, as well as empathy and the need to recognise the achievement of others. Children can underperform in Mathematics because they think they can't do it or are not naturally good at it. Our Curriculum addresses these preconceptions by ensuring that all children experience challenge and success in Mathematics by developing a growth mindset. Regular and ongoing assessment informs teaching, as well as intervention, to support and enable the success of each child. These factors ensure that we can maintain high standards, with achievement at the end of KS2 growing in time to be in line with National Average and seeing a higher proportion of children demonstrating greater depth, at the end of each phase.

Teaching Methods and Approaches

The teaching of maths at Sacred Heart provides opportunities for:

• Group work • Paired work • Whole class teaching • Individual work

Pupils engage in:

• Written methods • Practical work • Investigational work • Problem- solving • Mathematical discussion • Consolidation of basic skills and routines.

At Sacred Heart we recognise the importance of establishing a secure foundation in mental calculation and recall of number facts before standard written methods are introduced. A variety of teaching styles will allow for children's individual learning styles to be catered for. Children must be taught the appropriate language linked to the concepts they are being taught. This should occur at all levels. Children must know and be encouraged to use the vocabulary in the right context. We endeavour to set work that is challenging, motivating and encourages the pupils to talk about what they are learning.

A typical Maths lesson lasts approximately 1 hour. Maths is taught usually during the morning. Children begin with a short starter or 'Warm Up' activity which supports fluency in and recall of number facts and/ or an anchor task to embed them in to their learning for that day. Following this, children develop their Mathematical fluency and reasoning and problems solving skills. Discussion is promoted to ensure that mathematical ideas are introduced in a logical way to support conceptual understanding, and children share often are asked to share their thoughts. In KS1, these problems are almost always presented with objects (concrete manipulatives) for children to use. Children may also use manipulatives in KS2. Teachers use careful questions to draw out children's discussions and their reasoning and the children learn from misconceptions through whole class reasoning. Following this, the children are presented with varied similar problems which they might discuss with a partner or within a small group. At this point, scaffolding is carefully reduced to prepare children for independent practise.

The children might discuss their work in pairs with a partner and record some of their working out in their Maths books. The teacher uses this part of the lesson to address any initial errors and confirm the different methods and strategies that can be used. The class

then progress to the 'Independent application' part of the lesson, which is designed to be completed independently.

3. Assessment

3.1 **Assessment for Learning** takes place throughout the lessons to ensure that the development and progression through activities is at the appropriate pace for each individual child and timely adjustments can be made to teaching within the lesson, at the start of the next lesson or during the gap analysis session (built into the timetable) based on their responses. Children receive effective feedback through teacher assessment, both orally and through written feedback, and AfL is integral to the design of each lesson.

The structure of the teaching sequence ensures that children know how to be successful in their independent work. Some guided practise provides further preparation for children to be able to apply the skills, knowledge and strategies taught during the beginning part of the Maths lesson. Common misconceptions are addressed within the teaching sequence and key understanding within each 'small step' is reviewed and checked by the teacher and the children before progression to further depth.

A range of strategies should be used:

- **Questioning** – as open-ended questions or higher-order thinking questions, to engage children in deeper thinking and to assess their understanding.
- **Observation of approaches and outcomes towards the Learning Objective** which is shared and discussed with the children at the beginning of each lesson. This helps them understand what they are expected to learn and allows them to self-assess their progress towards those objectives.
- **Feedback loops** which provide timely and constructive feedback to children to guide their learning. Feedback can be oral, written, or through digital platforms, highlighting strengths, areas for improvement, and specific steps for growth.

At the end of the lesson, the children review their work and self and peer assessment are used consistently as outlined by the school's 'Feedback Policy'.

Opportunities for additional practise and correction are provided by the teacher, as appropriate, during marking, with a focus on promoting and achieving a growth mindset within the subject.

3.2 **Formative Assessment:** Short term assessment is a feature of each lesson. Observations and careful questioning enable teachers to adjust lessons and brief other adults in the class if necessary. The lesson structure of Maths is designed to support this process and the '*reflect or check out'* task at the end of each lesson also allows for misconceptions to be addressed.

Feedback: At Sacred Heart, Feedback should focus on moving learning forward, targeting the specific learning gaps that pupils exhibit. Specifically, high quality feedback may focus on the task, subject, and self-regulation strategies. Children are given feedback to improve

their learning (Education Endowment Foundation). Feedback is given in a variety of forms. Verbal feedback is used during the lesson with written Next Steps provided when necessary and appropriate for the individual. Not everyone lesson, or small step will need a next step. Sometimes, the next step is the next lesson. When marking children's work, all adults use the following codes in green pen:

-Children's work, when correct, is ticked during or after the lesson.

When the teacher wants to draw the child's attention to something, they may draw a circle around the number, calculation or misspelling for the child to self-regulate and think about why the teacher has circled a specific element of their work.

When work is incorrect, teachers will place a dot next to the incorrect equations or representation. Often a next step will follow if this is consistent.

When appropriate and the child can, a 'C' will be placed next to the piece of learning for them to make correct their mistake.

When appropriate, teachers will provide a next step for the child to complete. Next steps may be presented through whole class feedback, written feedback or by an additional task to 'check' or 'deepen' their learning.

At the end of each blocked unit of work, the children also complete the carefully aligned White Rose Maths 'Post Assessment'. The outcome of this is used by the teacher to ensure that any identified gaps in understanding can be addressed before the next unit is taught. Each child's scores are also input on a class spreadsheet, which provides an overview of achievement in each specific area within the programme of study. This also informs dialogue with parents and carers during open evenings, as well as the judgements made at the end of the term as to the extent that each child has demonstrated mastery of each 'fundamental' objective.

3.3 **Summative Assessment:** Teachers administer NFER arithmetic and reasoning papers. The results of these papers are used to identify children's ongoing target areas, which are communicated to the children, as well as to parents and carers at Parents conferences. They are also used alongside the Post assessments and outcomes of work, to inform the whole school tracking of attainment and progress for each child during pupil progress meetings. Assessment data in maths is reviewed throughout the year to inform bespoke interventions and to also ensure that provision remains well-informed to enable optimum progress and achievement. End of year data is used to measure the

extent to which attainment gaps for individuals and identified groups of learners are being closed. This data is used to inform whole school and subject development priorities for the next school year.

4. Planning and Resources

The use of Mathematics resources is integral to the concrete – pictorial – abstract approach and thus planned into teaching and learning. The school has a wide variety of good quality equipment and resources, both tangible and computing based, to support our learning and teaching. These resources are used by our teachers and children in several ways including:

Demonstrating or modelling an idea, an operation or method of calculation. Resources for this purpose would include: a number line; place value cards; dienes; place value counters and grids; money or coins; measuring equipment for capacity, mass and length; 5 bead strings; the interactive whiteboards and related software; 3D shapes and/or nets; Numicon and related resources and software; multilink cubes; clocks; protractors; calculators; dice; number and fractions' fans; individual whiteboards and pens; and 2D shapes and pattern blocks, amongst other things

Enabling children to use a calculation strategy or method that they couldn't do without help, by using any of the above or other resources as required Standard resources, such as number lines, multi-link cubes, dienes, hundred squares and counters are located within individual classrooms. Resources within individual classes are accessible to all children who should be encouraged to be responsible for their use. Further resources (often larger items shared by the whole school) are also available as part of a central supply. Resources to support teachers' own professional development and understanding of new approaches as part of a mastery approach are available on the NCETM platform. As well as overviews of learning, these include short videos which demonstrate new methods to ensure accuracy. Teachers are encouraged to use any school space as an outdoor classroom when possible, for example, when teaching length, area or perimeter.

Resources

At Sacred Heart, we have purchased the White Rose premium learning resources which aims to supplement our mastery maths programme. In addition, further subscriptions have been purchased to support our teaching and learning. These are: classroom secrets (KS2) and Target Your Maths is one source of material for teachers. This practice uses conceptual and procedural variation to build fluency and develop greater understanding of underlying mathematical concepts premier stars (KS1). Throughout the school, we have challenge questions prepared which encourages children to take their understanding to a greater level of depth. These are usually taken from websites such as NRich and NCETM. Teachers provide opportunities for the children to reflect on their learning. This is an opportunity for children to review, reason and reflect on learning and enables the teacher to gauge their depth of understanding.

5. EYFS

Developing a strong grounding in number is essential so that all pupils develop the necessary building blocks to excel mathematically. Children in EYFS, should be able to count confidently, develop a deep understanding of the numbers to 10, the relationships between them and the patterns within those numbers.

Children in Reception have a short daily Maths teaching session, during which time they begin to develop their understanding of simple mathematical concepts such as counting to 20, maintaining 1

to 1 correspondence, simple addition and subtraction facts, to recognise and describe simple 2d and 3d shapes. Children are taught these concepts using physical resources, pictorial resources, songs, games and role-play. In Reception, children have a three-part lesson from Autumn 1. This consists of:

- Whole class: Revisit and Review - 5 minutes
- Whole class main teaching - 10 minutes
- Focus activity for a small group, according to current attainment.

Throughout the week a child will work with an adult - either a teacher or a supporting adult - on a differentiated task. This activity is completed in 10 - 15 minutes. This structure to the lesson enables teachers to secure a good balance between whole class work, group teaching and individual practise. It also enables teachers to establish regular routines thereby maximising teaching time. It supports assessment daily, as well as individual feedback to children, ensuring that children receive immediate intervention as required during the supported focus activity. Teachers encourage children to talk in full sentences when they can and know this helps them conceptualise the math's that is being learnt.

By providing frequent and varied opportunities to build and apply this understanding - such as using a range of manipulatives children will develop a secure base of knowledge and vocabulary from which mastery of mathematics is built. In addition, it is important that the curriculum includes rich opportunities for children to develop their spatial reasoning skills across all areas of mathematics including shape, space and measures.

In Reception, the independent activities in the Maths area link to the focus for the week. For example, if the focus for the week is addition, then activities on the Maths will often link to this. In addition to these planned independent activities, children also can self-select Maths resources to consolidate their learning during child-initiated activities. We recognise the importance of play-based learning and therefore encourage children to develop their understanding during their play. Such opportunities are provided in both the inside and outside environment. Regular observations and assessments help to ensure that children that need additional intervention to consolidate their mathematical understanding are identified and supported by appropriate interventions.

It is important that children develop positive attitudes and interests in mathematics, look for patterns and relationships, spot connections, 'have a go', talk to adults and peers about what they notice and not be afraid to make mistakes.

6. Key Stage One and Key Stage Two

Through Years 1 to 6 we use a coherent programme of high-quality materials and exercises, which are structured with great care to build deep conceptual knowledge alongside developing procedural fluency. This scheme is based on the principles of how Mathematics is taught in many high performing jurisdictions in East Asia and aligned with the 2014 National Curriculum. Over the course of 2 academic years, due to some mixed age groups classes, all units of the 2014 National Curriculum are covered. Teachers plan activities and additional tasks which offer support and provide further challenge for children who can progress further in their learning. Lessons in both key stages follow the same sequence (see section 2: Teaching and Learning). In KS1, the teacher might use 'mini-plenaries' to explain each question during the children's completion of the work set. This ensures that all children can complete the task with confidence.

Key Stage 1 – Year 1 and 2.

The principal focus of mathematics teaching in Key Stage 1 is to continue to build on the positive attitudes and interests from EYFS and to ensure that pupils develop confidence and mental fluency with whole numbers, counting and place value. This should involve working with numerals, words and the four operations, including with a wider range of manipulatives (e.g. concrete objects and measuring tools).

At this stage, pupils should develop their ability to recognise, describe, draw, compare and sort different shapes and use the related vocabulary. Teaching should also involve using a range of measures to describe and compare different quantities such as length, mass, capacity/volume, time and money.

By the end of Year 2, pupils should recall and use addition and subtraction facts to 20 fluently, using related facts to 100 and be precise in using and understanding place value. An emphasis on practise at this early stage will aid fluency.

Lower Key Stage 2 – Years 3 and 4

The principal focus of mathematics teaching in lower Key Stage 2 is to ensure that pupils become increasingly fluent with whole numbers and the four operations, including number facts and the concept of place value. This should ensure that pupils develop efficient written and mental methods and perform calculations accurately with increasingly large whole numbers.

At this stage, pupils should develop their ability to solve a range of problems, including with simple fractions and decimal place value. Teaching should also ensure that pupils draw with increasing accuracy and develop mathematical reasoning so they can analyse shapes and their properties and confidently describe the relationships between them. It should ensure that they can use measuring instruments with accuracy and make connections between measure and number.

By the end of Year 4, pupils should have memorised their multiplication tables up to and including the 12-multiplication table and show precision and fluency in their work. This will ensure they are well prepared for the MTC (multiplication tables check) which is the online, on-screen assessment given to all pupils in year 4.

Upper Key Stage 2 – Years 5 and 6

The principal focus of mathematics teaching in upper Key Stage 2 is to ensure that pupils extend their understanding of the number system and place value to include larger integers. This should develop the connections that pupils make between multiplication and division with fractions, decimals, percentages and ratio.

At this stage, pupils should develop their ability to solve a wider range of problems, including increasingly complex properties of numbers and arithmetic, and problems demanding efficient

written and mental methods of calculation. With this foundation in arithmetic, pupils are introduced to the language of algebra as a means for solving a variety of problems. Teaching in geometry and measures should consolidate and extend knowledge developed in number. Teaching should also ensure that pupils classify shapes with increasingly complex geometric properties and that they learn the vocabulary they need to describe them.

By the end of Year 6, pupils should be fluent in written methods for all four operations, including long multiplication and division, and in working with fractions, decimals and percentages.

7. Equal Opportunities

The school is committed to ensuring the active participation and progress of all children in their learning. All children will be given equal opportunities to achieve their best possible standard, whatever their current attainment and irrespective of gender, ethnic, social or cultural 7 background, home language or any other aspect that could affect their participation or the progress of which they are capable.

8. Areas of learning:

Mathematics is a subject in which pupils need to be able to move fluently between representations of mathematical ideas. The programmes of study are organised in a distinct sequence and structured into separate domains.

These domains for KS1 are:

- Number and place value
- Addition and subtraction
- Multiplication and division
- Fractions
- Measures
- Geometry: properties of shape
- Geometry: position and direction
- Statistics (Year 2)

These domains for KS2 are:

- Number and place value
- Addition and subtraction
- Multiplication and division
- Fractions (including decimals and percentages)
- Ratio and proportion (Year 6)
- Measures
- Geometry: properties of shape
- Geometry: position and direction
- Statistics
- Algebra (Year 6)

The distinct domains highlight the important areas of mathematics that children need to learn to make effective progress. Children should make connections across the mathematical ideas to develop fluency, mathematical reasoning and competence in solving increasingly sophisticated problems. They should also apply their mathematical knowledge to science and other subjects.

Number

The Programme of Study specifies a progression of number-based skills for children to acquire as they develop their mathematical ability. In order to facilitate this, the teaching staff in Sacred Heart will ensure that:

- Children will be encouraged to use mental calculations where appropriate.
- Children will have the opportunity to discuss and develop a range of calculation strategies.
- Teaching will encourage flexibility of thinking and utilisation of connections within mathematics.
- Children's computational skills will be developed and consolidated using a balance between practise and application in meaningful contexts.
- Opportunities will be provided for children to develop their estimation skills, and will be encouraged to estimate answers before completing calculations.
- Teaching will place a strong emphasis on ensuring children gain a sound understanding of the Place Value basis of the number system.

Shape and Space

The Programme of Study specifies a progression of skills in Shape and Space for children to acquire as they develop their mathematical ability. In order to facilitate this, the teaching staff in Sacred Heart will ensure that:

- Teaching will place emphasis on observing and understanding the properties of 2-D and 3-D shapes.
- Opportunities will be provided for the practical construction and investigation of shapes.
- Children will be given opportunities to explore position and movement in real-life contexts, utilising ICT (including Beebot and Probot) where appropriate.

Measures

The Programme of Study specifies a progression of skills in Measures for children to acquire as they develop their mathematical ability. In order to facilitate this, the teaching staff in Sacred Heart ensure that:

- Children will use a range of measuring equipment in meaningful contexts, and be encouraged to make choices regarding the most suitable equipment.
- Children will follow a progression beginning with direct comparison, through measuring with non-standard units, to measuring with standard units with increasing accuracy.

- Children will be given opportunities to develop estimation skills in all measures.

- Teaching will place strong emphasis on ensuring that children understand that all measurement is approximate, and that they can make sensible decisions on the accuracy necessary in different situations.

Handling Data

The Programme of Study specifies a progression of skills in Handling Data for children to acquire as they develop their mathematical ability. In order to facilitate this, the teaching staff in Sacred Heart will ensure that:

- Teaching will be designed to ensure that children understand that the collection, representation and interpretation of data is a means through which real-life decisions can be made.

- Handling Data skills are used as a means of solving problems, through a four-point process: pose a question; collect data; organise, display & interpret data; answer original question.

- Children will be given opportunities to make decisions regarding what information is collected, how it is collected, how information is processed and how it is displayed.

- Children will be given opportunities to apply data handling skills in a range of contexts, across subject areas.

- Children will be given opportunities to develop an increasing range of ICT based handling data skills.

9. Inclusion

Taking a mastery approach, differentiation occurs in the support and intervention provided to different children, not in the topics taught, particularly at earlier stages. The National Curriculum states: 'Children who grasp concepts rapidly should be challenged through being offered rich and sophisticated problems before any acceleration through new content. Those who are not sufficiently fluent with earlier material should consolidate their understanding, including through additional practise, before moving on.' There is little differentiation in the content taught but the questioning and scaffolding individual children receive in class as they work through problems will differ, with higher attainers challenged through more demanding problems, which deepen their knowledge of the same content before acceleration onto new content. When necessary, tasks will be differentiated. Children's difficulties and misconceptions are identified through immediate formative assessment and addressed with rapid intervention – commonly through individual or small group support later the same day.

A range of inclusion strategies, as listed on the school's inclusion planning key, are embedded in practice and teachers are aware of the special educational needs of the children in their Maths class, as well as those who have English as an additional language. Although the expectation is that many children will move through the programmes of study at broadly the same pace, the 2014 National Curriculum states: 'Decisions about when to progress should always be based on the security of children's understanding and their readiness to progress to the next stage.' If a child's needs are best met by following an alternative plan, including coverage of the content from a previous year, this will be overseen by the SENDCo, in collaboration with the class teacher and with the knowledge of SMT.

Specific arrangements for the provision of children with SEND will be communicated to parents and carers during SEND reviews.

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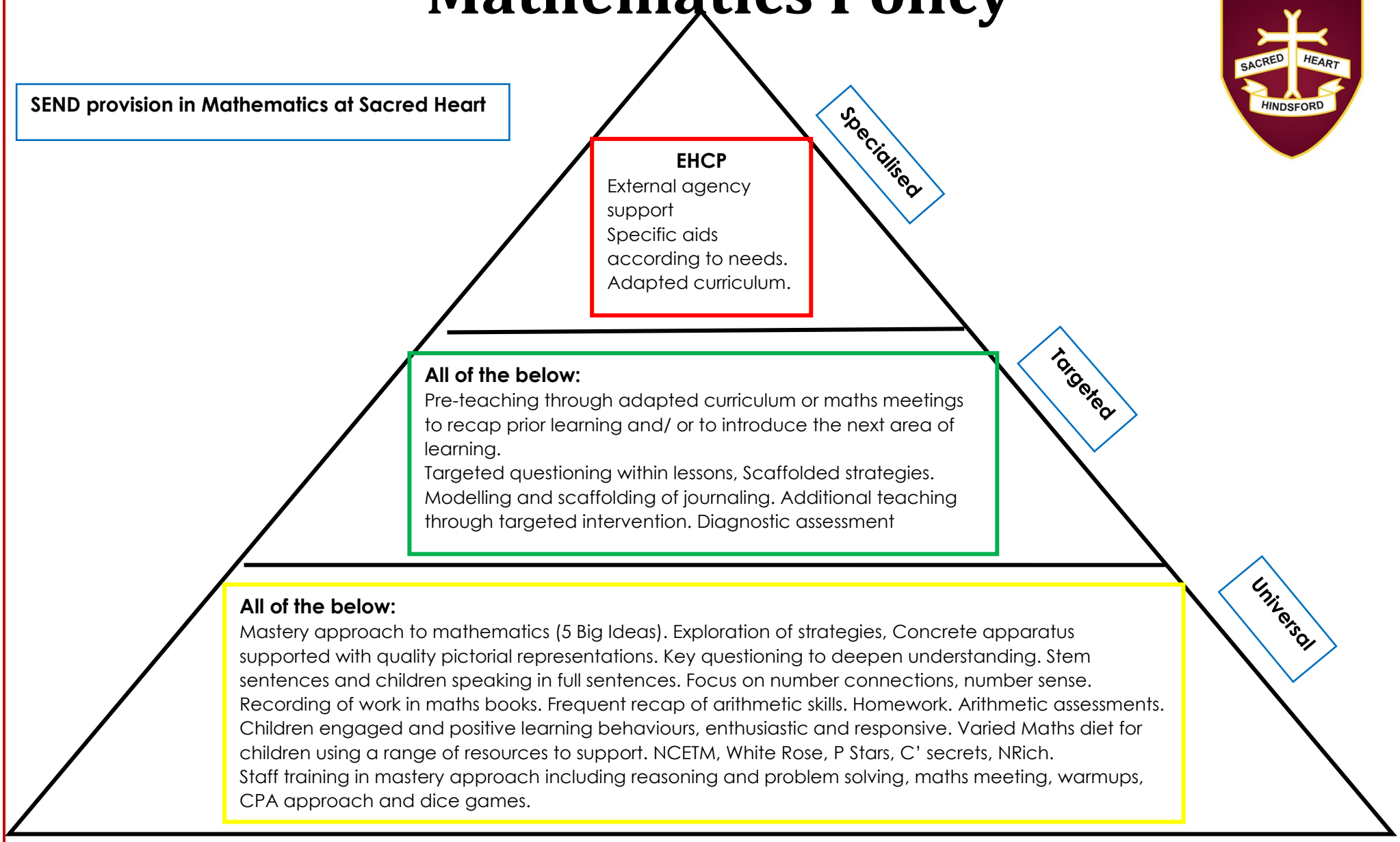
SEND provision in Mathematics at Sacred Heart



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10. Role of the Subject Leader

The Subject Leader should be responsible for improving the standards of learning and teaching in maths through:

Monitoring and evaluating Maths:

- Planning for learning and teaching (including Intervention and Support programmes)
- Scrutiny of outcomes of learning and teaching
- The deployment and provision of support staff
- The quality of the Learning Environment
- Pupil progress

Furthermore, the subject leader will raise the profile of Maths at Sacred Heart through best practice. They will model lessons, as appropriate to new staff, ECTs and peers to support continued professional development. They will ensure the high quality of Maths displays around the school, present certificates of achievement during end of term assemblies and involve the school in 'celebrations' of Maths, including participation in events such as: Times tables 'Come to school as a Rockstar Day', 'World Maths Day', 'NSPCC Number Day' and/ or 'Array Day'. The subject leader will support staff in providing opportunities for learning outside the classroom in Maths and will identify and organise opportunities which enable this, as appropriate.

- The subject leader will monitor progression and continuity of Maths throughout the school through lesson observations and regular monitoring of outcomes of work in Maths exercise books.

- The subject leader will ensure that all staff have access to year group plans and the relevant resources which accompany them.

- The subject leader will monitor children's progress through the analysis of whole school data. They will use this data to inform the subject development plan which will detail how standards in the subject are to be maintained and developed further.

- The subject leader will, on a regular basis, organise, audit and purchase central and class-based Maths resources.

- Through ongoing involvement in the Northwest Three Maths Hub programme will keep up to date with current publication and disseminate this information to colleagues.

- The subject leader will extend relationships and make contacts beyond the school.

- The subject leader will develop opportunities for parents/carers to become more involved in Maths education.

- The subject leader will ensure that all staff have access to professional development including observations of outstanding practice in the subject.

11.Home Learning

Home learning tasks were appropriate will be set via Google Classroom. Children will be set home work weekly in maths. Some work will need to be 'turned in' whilst others may refer to the above websites / applications.

Times Tables Rock Stars should be accessed 3 times a week for a minimum of 15 minutes. Children will be set weekly time tables to practise on TT Rockstars and will complete speed tables and/ or times tables tests to check their progress.

IXL will be used in school and at home. Children will be set tasks by the teacher. Usually, these tasks will be areas of learning that have been completed in school for children to practise and recap. Also, children will be able to select tasks to earn more coins as well as play games online.

12. Parents

We believe that parents have a fundamental role to play in helping children to learn. We do all we can to inform parents about what and how their children are learning by:

- Holding parents' evenings to discuss children's progress.
- Sending an annual report to parents in which we explain the progress made by each child and indicate how the child can develop their learning.
- Explaining to parents how they can support their children with home learning.
- Publishing relevant documentation on the school website. An overview of the Maths curriculum is available on the school's website, as well as guidance in the progression in calculation methods used by the school.

• Parents are informed of their child's progress at Parents Evenings and this is also communicated in written school reports.

• Parents and carers are encouraged to speak to their child's teacher at any point during the year, either informally or by making a specific appointment.

• The school also provides several opportunities for parents/carers to learn about what their child is learning and the way their child is being taught through parent workshops which are now being videoed for ease of access.

13.Review

This policy must be read and used in conjunction with the:

- Calculations Policy
- New Maths Curriculum 2014 government documentation
- Maths Ready to Progress Criteria and Yearly Overviews document
- Learning and teaching policy
- Assessment and Marking policies
- Special Educational Needs Policy
- Computing Policy
- Equal Opportunities Policy
- Health and Safety Policy

The mathematics policy will be reflected in our practise. The policy will be reviewed Autumn 2027