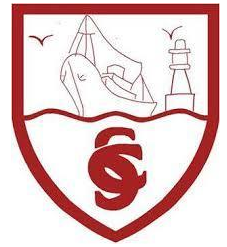


# CHARLES SAER COMMUNITY PRIMARY SCHOOL



## MATHS CURRICULUM STATEMENT

This document is intended for all teaching staff, school governors, parents, inspection teams and LEA Advisers/Inspectors.

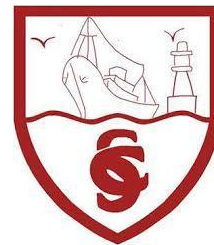
The Statutory requirements for the teaching and learning of Maths are laid out in the National Curriculum in England: Framework Document (2014).

This policy describes our aims and our practice in the teaching of Maths.

This policy should be read in conjunction with the following school policies:

- Teaching and Learning Policy
- Assessment Policy
- Feedback Policy
- SEND Policy
- Equal Opportunities Policy

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## INTENT

Mathematics is a creative and highly inter-connected discipline that has been developed over centuries, providing the solution to some of history's most intriguing problems. It is essential to everyday life, critical to science, technology and engineering, and necessary for financial literacy and most forms of employment. A high-quality mathematics education therefore provides a foundation for understanding the world, the ability to reason mathematically, an appreciation of the beauty and power of mathematics, and a sense of enjoyment and curiosity about the subject.

(National Curriculum 2014)

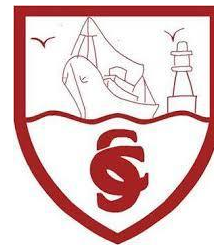
At Charles Saer we aim to ensure that all children:

- Become fluent in the fundamentals of mathematics
- Are able to reason mathematically
- Can solve problems by applying their mathematical skills.

The mathematics teaching at Charles Saer Primary School provides rich and enjoyable experiences to help children develop a positive and confident attitude towards mathematics in order for each child to achieve their full mathematical potential.

We recognise that many of our pupils begin their journey in mathematics at a starting point below national expectations and so we strive to enable each pupil to develop within their capabilities, harbouring an enthusiasm and fascination about Maths itself. We are committed to ensuring that pupils recognise the importance of Maths in the wider world and giving pupils confidence in key mathematical skills, concepts and processes so that they are able to express themselves and their ideas, including the use of mathematical language, with assurance.

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## IMPLEMENTATION

### Timetable

In **Early Years and Nursery**, Maths is delivered through continuous provision activities and short group or individual guided sessions.

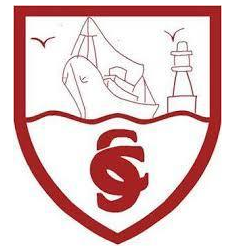
In **Year One** lessons are initially blocked into two maths mornings where children access a range of activities including continuous provision, group work and whole class teaching. Smaller sessions on the remaining three days are used to pre-teach skills, practise arithmetic strategies and enjoy maths games, books and rhymes. This gives children a total of approximately 5 hours of Maths each week. Throughout the year, the teaching style becomes more formal in order to prepare children for Year Two and can progress towards a daily Maths lesson, alongside a daily English lesson in line with other year groups.

In **Year Two**, lessons last for approximately one hour and are split to include arithmetic, fluency, reasoning and problem solving. This gives children a total of approximately 5 hours of Maths each week.

In **KS2**, lessons last for one hour fifteen minutes each day and are split to include arithmetic, fluency, reasoning and problem solving. This gives children a total of approximately 6.25 hours of Maths each week.

Maths lessons are clearly set out and followed in each class' daily timetable, which are available to view separately, unless a whole school initiative or activity is taking place.

# CHARLES SAER COMMUNITY PRIMARY SCHOOL



## Fluency – Reasoning – Problem Solving

At Charles Saer, we follow the White Rose scheme of learning in Early Years, Key Stage One and Key Stage Two to guide our journey towards mastery in mathematics.

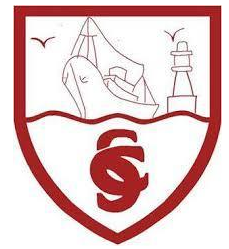
Within our mathematics planning and teaching, teachers reinforce the expectation that all children are capable of achieving high standards of mathematics. Differentiation is encouraged by emphasising deep knowledge and giving individual support and intervention where appropriate. It is expected that all children will follow the progression set out within the White Rose scheme, with block planning of objectives enabling children time to consolidate the skills and work towards mastery. Practice and consolidation underpin our curriculum in order to ensure that all pupils are fluent in the key mathematical concepts - this is further supported and monitored through the implementation of our “non-negotiable” mathematical statements. Teachers use targeted and open-ended questioning to assess children’s understanding and ensure that they are able to reason and explain their mathematical thinking.

In **Early Years and Nursery**, continuous provision is carefully planned to ensure a variety of mathematical activities are available for children to access freely. These activities encourage the learning of Maths in a child led environment, where teachers and teaching assistants model and use questioning to encourage children to explore mathematical concepts. Mathematical language is modelled to children in order to encourage discussion during play and through the use of books and rhymes. In Reception, children are also taught in small groups each day, where the White Rose planning is used in combination with Numberland, to support the Early Learning Goals and ensure that children are given the opportunity to master the fundamental mathematical skills.

In **KS1 and KS2**, lessons give children ample opportunity to explore and embed their mathematical skills, using practical resources to support a concrete - pictorial - abstract (CPA) learning pathway. All teaching staff and teaching assistants have received training on how to implement the curriculum within their classroom, with a focus on using CPA to support the understanding of new concepts and how to use open ended mathematical questioning to support learners.

Where possible, new concepts are shared within the context of an initial related problem, which children are able to discuss. 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. As a result, all children are exposed to challenging questions which are modelled by the teacher. This allows children to be exposed to the process of reasoning and problem solving in a ‘safe’ environment, where staff explain their thinking and strategies used to solve problems. We encourage teachers to model making mistakes and to explore mistakes that children may make, both to ensure that children are engaged and thinking critically about the problem solving process, and also to show that making mistakes are part of the learning journey thus encouraging resilient learners.

# CHARLES SAER COMMUNITY PRIMARY SCHOOL



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. 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.

Within lessons, teachers use a variety of strategies to allow learners to explore and consolidate their skills, promoting discussion and questioning. These include:

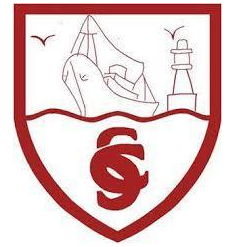
- Using concrete manipulatives
- Creating pictorial representations
- Teacher modelling
- Collaborative group work
- Talk Partners
- Independent work
- Problem solving and open-ended investigations

We know that many of our children find retention of mathematical facts and strategies difficult, and so we have supplemented and adapted the White Rose curriculum where appropriate, to ensure that children have increased opportunity to consolidate their learning and master essential skills. Teachers use the White Rose block overviews as a time-frame guideline but, in line with White Rose advice, are encouraged to adapt the teaching sequence if their assessment and professional judgements suggest this would be beneficial for children's learning.

## Arithmetic

From Year 2 upwards, lessons include a daily arithmetic starter to help children consolidate their learning and become fluent in the recall and application of basic arithmetic and number facts. The weekly teaching sequence also includes a session specifically to focus on arithmetic skills and strategies, using the non-negotiable statements as a basis for planning. These sessions are fast paced using a variety of strategies and games and also include a short arithmetic test. The emphasis of these sessions is to build children's confidence and fluency, allowing them to easily recall key facts and manipulate mental strategies in order to quickly solve arithmetic based questions. This is further outlined in the Arithmetic Teaching Overview and Times Tables Teaching Progression.

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## Grouping of children

We pride ourselves in a flexible approach to teaching and grouping children. Where possible, children are grouped and taught within their year group. However, we recognise that there are several factors which can impact a child's learning, and we aim to consider these in our groupings.

Additional factors that we consider within our groupings include, but are not limited to:

- The number of children within each cohort. Each year group within school has a total capacity of 45 children, although these numbers fluctuate year on year. This means that at times, some children will be taught in mixed aged classes. These classes and children are discussed on individual merit and are under continuous review. In mixed aged classes, the children follow the mixed aged progression from White Rose 2.0
- Social, emotional and behavioural factors. The social and emotional wellbeing of our pupils can have a huge impact on their learning, and we pride ourselves in providing a safe and nurturing environment to enable all children to succeed to the best of their ability.
- Academic achievement. Assessments and discussions with previous class teachers inform the initial grouping children at the beginning of each new academic year.

## ASSESSMENT

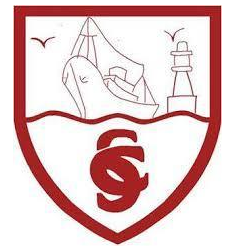
Assessment in Maths is used to:

- provide diagnostic information about individuals/groups enabling them to be tracked effectively.
- plan future teaching and learning
- provide summative information for teachers
- provide information for parents

Further evidence for assessment is provided by assessment of pupils' written work and also scrutiny of pupils' books by co-ordinators.

As a school, we have created a series of "non-negotiable" statements which we use as a basis for all children's assessment from Nursery through to Year 6. We believe that these statements provide the key skills in mathematics that are essential to our children's development and mathematical fluency. The statements also allow for small steps of progress to be monitored for children who are working below the expected standard, creating opportunities for targeted intervention to ensure each child continues to develop their skills and understanding. The statements were created as a whole school staff using National Curriculum objectives, White Rose small step statements and National Numeracy Strategy arithmetic statements. Teachers worked together in teams, including the previous and following consecutive year groups, to decide on the key learning each year group required, identifying strengths and weaknesses, and allowing staff to see the progression of

# CHARLES SAER COMMUNITY PRIMARY SCHOOL



each skill from the previous year group through to the following year group. These statements are shared centrally where all staff can access each cohort, allowing them to track back for each individual child, and are used continuously to monitor and plan. The document is formally updated at the end of each term and is monitored by the Maths Coordinator.

In **Early Years and Nursery**, detailed observations are recorded with evidence on Tapestry where they are linked to the Early Learning Goals and the Development Matters document. Parents have a linked Tapestry account, where they can see what their child has been learning at school and also upload activities they have shared at home with their child. Class teachers can then link these activities to support assessment statements, creating an overview of the whole child and creating positive home-school links. These assessments are passed forward to the subsequent teacher during transition.

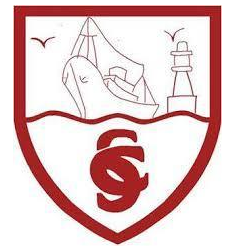
Included within the White Rose scheme of learning are a variety of assessment options. End of Block assessments are used at teacher's discretion within the teaching sequence; they are used as a snapshot informal assessment and may be delivered in test conditions, as a guided session or used as a question basis for a lesson.

The End of Term assessments include an arithmetic and reasoning paper, covering the objectives taught that term, and are used during a whole school assessment week. Data is recorded centrally by the Maths Coordinator and analysed, providing approximate grade boundaries in order to give an overview of each child's attainment. These results are NOT used as a standalone formal assessment, but are used to help inform teacher assessments at the end of each academic year.

In **Year One**, White Rose end of term assessments are used when the class teacher feels that each individual child is ready. During the test, children may use manipulatives to aid their understanding or they may be supported by an adult. Where additional help has been given, this is clearly recorded on the test. The tests are administered in such a way that the focus is on enabling children to become confident and comfortable when taking a test, modelling resilience and test techniques, rather than to collect data for formal assessment.

In **Year Two and Year Six**, these assessments are used as part of the assessment week during the Autumn Term. During Spring Term, the assessments are used alongside other preparations for the National SATS testing. In the Summer Term, the National SATS tests are administered and so there is no requirement for year two and year six to complete any additional testing.

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In **Year Three, Four and Five**, there is an assessment week at the end of each term, where the tests are administered. The tests are administered in line with the Year Six SATS expectations in order to help prepare children for this process. Children who have been identified as being potentially eligible for extra time or support, such as use of a reader, are given this where appropriate.

## SPECIAL NEEDS PROVISION

All pupils, whatever their starting point in education, regardless of race, gender or special needs, are entitled to have access to a broad, balanced curriculum which includes Maths. We have high expectations of all our pupils, and we aim to provide for all children so that they achieve as highly as they can, according to their individual abilities. We identify which individual pupils or groups of pupils are at risk of under-achieving and take steps to improve their attainment. More able children are also identified and suitable learning challenges provided.

Extra support can take many different forms. These include in class support from a Teaching Assistant / teacher; 1:1 support; same day interventions; pre-teaching of new concepts; enrichment activities; provision of additional resources; and extra-curricular clubs. This is not an exhaustive list – strategies implemented are personalised to the specific child and their identified need.

A nurture class operates each morning which supports the learning in KS1. A small number of children are selected to learn within this small group setting based on their personal, social and emotional needs rather than their academic ability. They access the same Maths curriculum as the other children but with a greater emphasis on developing the key skills that will allow them to become effective, independent learners in the future.

## EQUAL OPPORTUNITIES

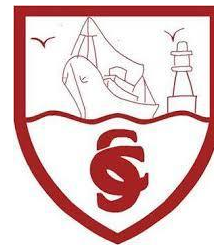
It is the responsibility of all teachers to ensure that all pupils, irrespective of race, gender, ability, ethnicity and social circumstances have equal access to the Maths curriculum and make the greatest personal progress possible.

This school is actively promoting equal opportunities by tracking groups causing concern. Consequently, we make use of a suitable range of learning activities, teaching strategies, educational materials and ICT aids to meet the needs of every individual learner. Every effort is made to ensure that the methods and materials used are free from prejudice or bias against any particular group.

Although the majority of the pupils within school are white British, any children for whom English is an additional language are supported in their use of English and will be given opportunities to make use of their home language to assist their learning and to add to the resources of the classroom.



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## CROSS CURRICULAR LINKS

Opportunities are created to link with other subjects where possible, in order to apply mathematical skills in a real-world context and give a purpose for learning. Maths creates opportunities for meaningful links with the STEM subjects, particularly in Science, and teachers ensure that the mathematical links and skills are highlighted to children. In art, children explore

Extra-curricular activities are offered in order to promote a love of mathematics. These include, but are not limited to:

- Year 5 Maths Challenge (UKMC)
- Enterprise after school clubs
- TTRockstars lunchtime clubs
- NSPCC Number Day
- Science Day supported by Fleetwood High School

## BRITISH VALUES AND SMSC

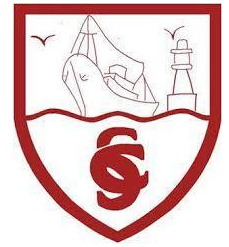
The DfE have recently reinforced the need “to create and enforce a clear and rigorous expectation on all schools to promote the fundamental British values of democracy, the rule of law, individual liberty and mutual respect and tolerance of those with different faiths and beliefs.” The Government set out its definition of British values in the 2011 Prevent Strategy.

## EVALUATION AND MONITORING

Monitoring of the standards of the children’s work, the quality of the teaching and learning taking place in the classrooms and the progress made by the pupils in Maths is a whole school responsibility, including the head teacher, the subject coordinator and class teachers. Monitoring will include scrutiny of books, lesson observations, pupil interviews, analysis of data and staff meetings. The results of any monitoring under-taken by the subject leader will be shared with the staff either formally or informally and will form the basis of the Maths action plan and used to identify future training needs. Records of monitoring are recorded in the Maths coordinator’s file.

The work of the Maths coordinator also involves being informed about current developments within the subject, supporting colleagues in light of these, and providing a strategic lead and direction for the subject in the school. The school works within a strong cluster group of primary and secondary schools in the Fleetwood area and has also participated in the Maths HUB Mastery Readiness programme to gain additional support and funding in implementing a mastery curriculum. The Maths coordinator meets regularly with the Head Teacher and gives Governors an annual overview of the current situation within the subject, including strengths and weaknesses.

# CHARLES SAER COMMUNITY PRIMARY SCHOOL



## IMPACT

As a school, we strive to ensure our children's attainment is in line with or exceeds their potential, whatever their starting point in primary education.

Using the mastery White Rose curriculum supported by our non-negotiable key skills will ensure our pupils are academically prepared for life beyond primary school and throughout their educational journey.

Our teaching objectives are taken from the small steps of progression, linked to the National Curriculum.

We aim to ensure that all pupils, on leaving Charles Saer Community primary School will:

- Have a love and enjoyment of the subject
- Be fluent in arithmetic skills
- Approach reasoning and problem solving tasks with resilience, and be able to draw on a variety of strategies to help solve these problems
- Use mathematical language accurately and confidently to express their ideas
- Understand the importance of Maths and its links to other subjects and the wider world

**Full copies of the following skills progression documents mentioned in this policy are available on request.**

- White Rose Small Steps and National Curriculum Objective Tracking
- White Rose Progression of Skills
- Arithmetic Teaching Overview
- Times Tables Progression

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