



## MATHS POLICY SUMMARY 2022/2023

<b>Rationale</b>	When children leave Riverview, they will be confident and enthusiastic mathematicians. They will understand the purpose of maths in real life and be active problem solvers which will enable them to have the essential skills necessary for economic literacy and employment.
<b>We believe synopsis</b>	<ul style="list-style-type: none"><li>• That what each child can do is the starting point of his/her learning.</li><li>• That how we provide for and interact with children has a profound effect on their well-being and learning.</li><li>• That children who grasp concepts readily should be challenged through being offered problems which deepen their understanding before moving on to new content.</li><li>• That the quality and variety of language that pupils hear and speak are key factors in developing their mathematical vocabulary and presenting a mathematical justification, argument or proof.</li><li>• That children learn best when challenges are relevant and engaging.</li></ul>
<b>Staffing</b>	<ul style="list-style-type: none"><li>• Staff knowledge and expertise is seen as a prerequisite for an effective mathematics curriculum.</li><li>• All staff working closely together so that knowledge and expertise is shared by all parties.</li><li>• Members of the team keeping abreast of relevant and up to date research and information.</li><li>• Staff attending school CPD, conferences and support group meetings.</li></ul>
<b>Maths curriculum</b>	<ul style="list-style-type: none"><li>• Programmes of Study are set out for each year group.</li><li>• The EYFS curriculum feeds into the National Curriculum for maths.</li><li>• Assessment for Learning is fundamental to raising standards and enabling children to reach their potential.</li><li>• By the end of each key stage, pupils are expected to know, apply and understand the matters, skills and processes specified in the relevant programme of study.</li><li>• 6 main areas of learning – number, ratio and proportion, algebra, measurement, geometry and statistics.</li></ul>



<b>Planning</b>	<p>Long term using Development Matters (EYFS) and the National Curriculum (KS1 and 2). Riverview's progression document is developed alongside the White Rose Maths Schemes of learning to ensure time is spent deepening and challenging understanding within each block of learning for each year group. This then leads into medium term plans which cover a number of weeks and finally to short term weekly plans. Planning is supported mainly by the use of White Rose Premium Resources, Maths No Problem (ideal for explore tasks) and NRich for further problem solving and reasoning tasks. Other online resources may also be drawn upon to support. <b>(See appendix 3)</b></p> <p>Maths skills/knowledge are developed/taught in other curricular subjects.</p>
<b>Teaching</b>	<ul style="list-style-type: none"><li>• In the EYFS, children are given the opportunity to develop their understanding of number, measurement, pattern and shape and space through short, focused teaching sessions as well as a range of cross curricular investigative situations, where there is plenty of scope for exploration and teaching opportunities at the point of learning.</li><li>• Opportunities for cross curricular learning across the school.</li><li>• Learning objectives are planned to meet the needs of groups and individuals. Focus on developing fluency, reasoning and problem solving throughout each week, with a focus on a Maths Mastery Curriculum.</li><li>• Each class (Year 2-Year 6) complete Practise Me, Show Me and Use Me learning across the week, which develop the core aims of the National Curriculum. Year 1 initially begin with focus groups throughout the transition period, with the aim of moving towards Practise Me, Show Me, Use Me when it is appropriate.</li><li>• Year 2 – Year 6 provide challenge to learners who are secure with a concept by providing purple challenges to enable them to apply and deepen their understanding during a lesson.</li><li>• A small steps-based teaching approach is crucial for children to grasp concepts confidently.</li><li>• Teaching is based upon a CPA approach essentially giving children the opportunities to learn with the support of manipulatives, moving on to pictorial understanding, leading to dealing with abstract mathematics.</li></ul>



	<ul style="list-style-type: none"><li>• Opportunities for children to investigate patterns and relationships through practical activities and cross curricular mathematical problems.</li></ul>
<b>Assessment and Record Keeping</b>	<p>Planning begins from a thorough understanding of children's needs through effective and rigorous ongoing assessment and tracking, combined with high expectations and ambition for all children to achieve.</p> <p>Throughout the year assessments are used to track attainment and progress using Insight Tracking. End of block WR assessments are used within Years 2-6 to assess knowledge gained and identify any gaps in knowledge. (see <a href="#">Assessment Policy</a>)</p>
<b>Partnerships with parents</b>	<p>Parents make a significant contribution to children's learning in maths. Children and parents working together maths workshops are timetabled for each class throughout the year. End of year reports are prepared for all year groups with a colour code for greater depth, expected, working towards and well-below.</p>

*Essentially, we want children to become confident mathematicians who can apply their skills effectively in everyday situations, in future learning and in the workplace.*



## **MATHS - FULL POLICY 2022/2023**

***When children leave Riverview, they will be confident and enthusiastic mathematicians. They understand the purpose of maths in real life and are active problem solvers which will enable them to have the essential skills necessary for economic literacy and employment.***

At Riverview CofE Primary and Nursery School our staff work closely together to provide quality provision for the children in our care.

### **The aims of the Mathematics Curriculum at Riverview CofE Primary School are:-**

- To promote awareness of the uses of mathematics in the world beyond the classroom particularly through play, practical work, problem solving, investigations and creativity.
- To support children in becoming fluent in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils have conceptual understanding and are able to recall and apply their knowledge rapidly and accurately to problems.
- To encourage children to reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language.
- To solve problems by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions.
- To provide meaningful cross curricular learning opportunities during the teaching sequence for pupils to use and apply their mathematic knowledge.
- To enable children to develop mental strategies and rapid recall of facts.
- To be able to use and apply the skills in other curricular areas.
- To develop positive attitudes to mathematics, recognising that mathematics can be both useful and enjoyable.



- To develop the skills which are needed to meet the demands of adult life.
- To involve parents by giving regular differentiated homework and/or mathematical games and inviting them into school to experience the teaching of mathematics, as well as keeping them updated with any changes.

### **In Mathematics at Riverview CofE Primary School we believe:-**

- That all children in our care have an entitlement to a broad and balanced mathematics curriculum (irrespective of learning needs, race, colour, gender, cultural/social background, or religious persuasion).
- That what each child can do is the starting point of his/her learning.
- That how we provide for and interact with children has a profound effect on their well-being and learning.
- That promoting first-hand experiences and practical activities allows children to explore and learn in a rich and stimulating environment.
- That children learn best when challenges are relevant and engaging.
- That children who grasp concepts readily should be challenged through being offered rich and sophisticated problems before moving on to new content.
- That the quality and variety of language that pupils hear and speak are key factors in developing their mathematical vocabulary and presenting a mathematical justification, argument, or proof.
- That learning must provide sufficient challenge according to the needs of the learner for each child to reach their full potential (mastery approach/differentiation when appropriate).
- Children continue to apply their reading skills in Maths as they read numbers in words, beginning in EYFS through to Year 6. When posed with worded problems, children draw upon their phonics learning to decode and read any unfamiliar words. Children will increase their Mathematical vocabulary and gain a greater understanding when using, applying, and explaining using new learning.



## **Guidelines**

In providing a basis for our Mathematics Policy we have discussed and evaluated the following areas:-

- Staffing
- Indoor/outdoor provision
- Learning environments
- The Early Years Foundation Stage curriculum and planning
- The National Curriculum in England – Key Stages One and Two framework document
- Observation, assessment, record keeping and target setting
- Partnerships with parents and families
- Ofsted
- Current and relevant research

## **Staffing**

Staff knowledge and expertise is seen as a prerequisite for an effective Mathematics curriculum, and this is accomplished by: -

- Staff working closely together so that knowledge and expertise is shared by all parties.
- Members of the team keeping abreast of relevant and up to date research and information.
- Staff attending school CPD, conferences and network meetings.
- Ensuring that the class teachers and the Maths Leader have appropriate training and experience with knowledge of mathematics teaching and learning across EYFS and Key Stages One and Two.





## **Early Years Foundation Stage Curriculum**

We believe developing a strong grounding in number is essential so that all children develop the necessary building blocks to excel mathematically. The aim is for children to be able to count confidently, develop a deep understanding of the numbers to 10, the relationships between them and the patterns within those numbers.

Learning experiences are planned for both indoor and out and are linked together through topic work which includes Mathematics as one of the Specific Areas of Learning.

Teaching and learning encompasses the three characteristics of effective learning:

- **Playing and Exploring** – children investigate and experience things, and ‘have a go’
- **Active Learning** – children concentrate and keep on trying if they encounter difficulties and enjoy achievements
- **Creating and Thinking Critically** – children have and develop their own ideas, make links between ideas, and develop strategies for doing things.

## **Key Stage One and Two**

Teaching and learning remains focused on first hand experiences and meaningful practical activities which promote risk taking, reasoning, and thinking skills. There is a focus on fluency and problem solving, as well as reasoning and discussion of ideas; teachers plan cross curricular problem solving opportunities for their class when appropriate.

The Riverview Maths progression document details the progression of skills throughout the school from EYFS to Year 6 and outlines the content which each year group will cover.

## **Planning**

Each class teacher is responsible for the maths teaching and learning in their class in collaboration with the Maths Leader. In Key Stage One and Two teachers plan a daily 45-minute maths lesson using the White Rose small steps planning as a guide. In addition, each class will have a Morning Maths session where children will begin with having the opportunity to retrieve previous learning and practice procedures. When completing Fluent in Five (arithmetic) children identify and practice mental/written methods, moving on to challenge including collaborative rapid reasoning questioning. A ‘keep up’ group or individuals may also be identified for intervention in the afternoon. Pre-teaching when appropriate will enable the children to have a small, focussed group intervention, to build confidence in the upcoming learning, and to be ready for the next small step.

Each teacher uses three stages of planning in maths:

### **Long term:-**



This is informed by Development Matters in the EYFS and the National Curriculum in Key Stages One and Two. Objectives are planned from Riverview's progression map which details content for each year group and the progression of skills across the school.

## **Medium term (see Appendix One)**

These plans are based on formative assessment carried out by the teacher and focus on what the children can already do. The medium-term plan outlines sequences of learning to build upon the children's knowledge and skills to meet the expectations of their year group. There is a focus on regular cross curricular problem solving, aiming to deepen and enrich the children's learning in maths. Through ongoing formative assessment, over time the medium-term planning should change and adapt to suit the needs of the cohort, groups and individuals.

Medium term plans include: Summary of ongoing formative assessments

- Details of ongoing skills

- Learning character

- Topic

- Learning objectives

- Steps to Success

- Prior learning required for end of year expectation

## **Short term (see Appendix Two)**

Weekly planning is produced and published onto Google Classroom in the form of a slide deck. The details outlined below will be considered when planning. The short term planning document can be used if teachers need further support and guidance when planning. It is not essential for a weekly planning proforma to be completed.

The weekly plans for each year group identify the learning objectives and steps to success to be taught along with explore tasks linked to the activities provided. The Morning Maths will also be planned for daily to deepen understanding of the learning. Children will begin a maths lesson with Fluent in Five, focussing on arithmetic proficiency in a timed situation. The needs of individual learners, based on ongoing assessment, are catered for within this framework. Extra provision for groups and individuals is included on the short-term planning as well as deployment of extra adults within the lesson.

Teachers amend their planning according to assessment of pupil progress and show clearly how this will affect the learning sequence. Short term planning and medium-term planning are both working documents, liable to change according to ongoing assessment, where one directly informs the other.





The link for White Rose Premium resources along with other useful websites and resources that can support the delivery of the Mathematics curriculum can be found in **Appendix Three**.

## **Observation, Assessment and Record Keeping**

Assessment is an essential part of the learning and development of children in the EYFS, Key Stage One and Two. Riverview's Maths Progression document are documented on our assessment manager 'Insight Tracking'. Regular objective tracking and three data drops throughout the year are inputted for Maths. Mock SATS for Year 2 and Year 6 and NFER scaled score tracking is inputted onto Insight Tracking. Teachers are able to use this information to inform future planning for their cohort.

## **Formative Assessment**

On entry to each year group a baseline assessment is carried out during the first half of the Autumn term. This is so that learning can be planned from each child's starting point. Assessments are made through a variety of questions, tasks, games, and investigations. Teachers may use resources from NFER, White Rose End of Block Assessments, Mastery Assessment documents (NCETM), questions from sample statutory assessments from DFE as well as their own materials.

Ongoing assessments are made throughout the year. These may include formative assessment and some summative assessment using materials from the DFE and are submitted to the leadership team. Provision is then put in place for groups and individuals based on these assessments. (See Assessment Policy)

## **Summative Assessment**

At the end of Reception teachers assess against the Early Learning Goals.

At the end of each year group in Key Stage One and Two teachers assess against the National Curriculum end of year expectations. Children in Year Three to Year Five also complete a 'NFER' assessment. At the end of Year Two and Year Six children take formal statutory assessments (SATs tests). All assessment is analysed by teaching staff using QLA and are used to inform the children's next steps in their learning. (See Assessment Policy)

## **Children with Special Educational Needs**

Teachers differentiate for learners as appropriate within the class so that every child makes progress from their starting point. Teachers use practical resources, visual aids and ICT to meet the needs of all pupils in the class (see SEND Policy).



## **Pupil Premium Group**

There is additional provision for children who qualify for pupil premium funding, SLT support in class, one to one catch up sessions and intervention for small groups of children through 0815 club. The class teacher and maths subject leader use ongoing assessment to allocate pupil premium intervention for each cohort.

## **Partnerships with parents and families**

At Riverview we believe that partnership with parents and families is paramount. To develop this partnership, we provide the following opportunities:

### **Visits to school:-**

- All Nursery and Reception children and parents/carers are invited to meet their teacher and their class prior to their admission.
- 'Meet the Teacher' meetings for all parents/carers are held in the Autumn term, soon after the children have started in their class in September.
- Maths children and parent workshops allow parents and carers to see part of a maths lesson in action, then speak with the maths leader in an informal workshop with other parents.

### **Meetings with parents:-**

- All children have a parent/teacher 'Time for Talk' meeting in the Autumn, Spring and Summer terms.
- Parents can make an appointment to meet their child's teacher or the maths leader to discuss their child's learning in maths.

### **Information sharing:-**

- Internet user agreements are issued when a child starts school
- Home/School Agreements are issued when a child starts school.



# Riverview C of E Primary and Nursery School

Ewell Family Centre with Riverview Daycare

Every child matters, every moment counts

Headteacher: Mrs M Atkins

- Parents/carers are encouraged to become involved in their child's home learning (e.g. supporting their child at home with maths games and homework, this may be accessed on Google Classroom and turned in for teachers to review.  
Weekly TTRS home learning set  
When appropriate additional Maths home learning to support class work and retrieval
- Children's reports go out in the summer term for all classes, this will state as to whether the child is at the expected standard for the year group, well below, working towards or working at greater depth.




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## Appendix One – Medium term planning proforma

 <b>Riverview CofE Primary and Nursery School</b> <b>Medium Term Planning 2022/2023</b>						
<b>Subject area: Maths      Class:</b>						
Formative assessment summary						
Ongoing skills						
Learning character:						
	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6
Cross curricular learning						
<b>Topic:</b>						
<b>Learning objectives and Steps to Success</b>	▪	▪	▪	▪	▪	▪
<b>Prior learning/ concepts needed for end of year expectation</b>	▪	▪	▪	▪	▪	▪



# Riverview C of E Primary and Nursery School

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## Appendix Two – Short term planning proforma

Riverview CofE Primary and Nursery School  
Short Term Planning 2022/2023

ClassMaths      DateTeacher

<b>Topic:</b>	
<b>3Cs Focus: Communication/Computing/Calculating</b>	<b>Life skill: Linguistics/cultural experience/ economic literacy/ social literacy</b>
<b>Previous Learning:</b>	<b>Vocabulary:</b>
<b>PP: SEN: EAL:</b>	
<b>Lesson 1</b>	
<b>Small Step</b>	
<b>Learning objectives</b>	<b>Explore</b>
<b>Steps to Success</b>	<b>Main session (Practise Me/Show Me/Use Me)</b>
<b>Mathematical Talk</b>	<b>Purple Challenge</b>
<b>Maths Meeting</b>	<b>Plenary</b>



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<b>Fluent in Five (Retrieval)</b>	
<b>Evaluation</b>	
<b>Lesson 2</b>	
<b>Small Step</b>	
<b>Learning objectives</b>	<b>Explore</b> <b>Main session (Practise Me/Show Me/Use Me)</b>
<b>Steps to Success</b>	<b>Purple Challenge</b>
<b>Mathematical Talk</b>	<b>Plenary</b>
<b>Maths Meeting</b> <b>Fluent in Five (Retrieval)</b>	
<b>Evaluation</b>	





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<b>Lesson 3</b>	
<b>Small Step</b>	
<b>Learning objectives</b>	<b>Explore</b>
<b>Steps to Success</b>	<b>Main session (Practise Me/Show Me/Use Me)</b>
<b>Mathematical Talk</b>	<b>Purple Challenge</b>
<b>Maths Meeting</b>	<b>Plenary</b>
<b>Fluent in Five (Retrieval)</b>	
<b>Evaluation</b>	
<b>Lesson 4</b>	
<b>Small Step</b>	
<b>Learning objectives</b>	<b>Explore</b>
<b>Steps to Success</b>	<b>Main session (Practise Me/Show Me/Use Me)</b>
	<b>Purple Challenge</b>



# Riverview C of E Primary and Nursery School

Ewell Family Centre with Riverview Daycare

Every child matters, every moment counts

Headteacher: Mrs M Atkins

<b>Mathematical Talk</b>  <b>Maths Meeting</b> <b>Fluent in Five (Retrieval)</b>	<b>Plenary</b>
<b>Evaluation</b>	
<b>Lesson 5</b>	
<b>Small Step</b>	
<b>Learning objectives</b>	<b>Explore</b>
<b>Steps to Success</b>	<b>Main session (Practise Me/Show Me/Use Me)</b>
<b>Mathematical Talk</b>	<b>Purple Challenge</b>
<b>Maths Meeting</b>	<b>Plenary</b>
<b>Fluent in Five (Retrieval)</b>	
<b>Evaluation</b>	



## **Appendix 3**

### Websites/Resources for Planning and delivering the Maths Curriculum

- <https://resources.whiterosemaths.com/resources/>  
Use for accessing White Rose premium resources, including planning guidance.
- <https://accounts.thirdspacelearning.com/v1/users/login>  
Useful for planning Fluent in Five and using for explore tasks, along with additional whole class questions.
- <https://nrich.maths.org/>  
Good for problem solving and investigations.
- <https://www.ncetm.org.uk/>  
National Centre for the Excellence in teaching Mathematics – research and guidance, useful video clips to support.
- <https://www.twinkl.co.uk/search>  
Additional activities for the Maths Curriculum
- <https://trockstars.com/>  
Use for setting weekly home learning tasks for times tables
- <https://play.numbots.com/?#/game/game-mode>  
Same login details as TTRS, use for rapid recalling number facts

Maths No problem Textbooks Year 1-6

Useful for visual representations, real life problems and for explore tasks