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## Riverside Community Special School Mathematics Policy

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Policy by: Catherine Le Roux

Date: Summer 2024

This is a Non-Statutory Policy

To be reviewed biannually.

Admin/current Policies/2024

(This policy is available on our school website and is available on request from each school office. We also inform parents/carers about this policy when their children join our schools.)

This policy will be reviewed in full on at least a biannual basis.



## MATHEMATICS POLICY

*"Teaching and learning activities enthuse, engage and motivate children to learn, and foster their curiosity and enthusiasm for learning."* (Riverside T & L policy)

### **Intent**

Mathematics is essential to everyday life. At Riverside we:

- promote enjoyment and enthusiasm for mathematics through practical activities, exploration and discussion.
- build on individual interests and provide opportunities for pupils to respond to their own imagination and ideas for play.
- encourage confidence in pupils by nurturing and celebrating their mathematical knowledge and skills.
- provide a broad and balanced mathematical curriculum that covers a range of maths themes and subject areas at all levels.
- develop logical thinking and reasoning skills through a natural curiosity and an investigative approach in a range of contexts.
- ensure that pupils have the opportunities to use their knowledge and skills at home and in the local community via regular educational visits and outdoor learning.
- develop a knowledge and understanding of numbers and the number system; how information is gathered and presented; and shape, space and measuring skills in a range of contexts.
- encourage the use of current mathematical language.

### **Implementation**

#### **Planning**

At Riverside the children are streamed in to Pathways - EYFS, Curiosity, Discovery and Builders (see Maths Curriculum Overview) and planning is sequenced and tailored to the needs of the different cohorts of children.

In KS1 and KS2 we follow the National Curriculum at the appropriate point of pupils' learning which also includes elements from EYFS, EQUALS curriculum and Hampshire SEND Maths documents. This ensures we provide essential coverage, learning objectives and standards which are required for all subjects.

Staff complete half-term planning in the areas of Number and Counting, Operations and Area of study. For Area of study, staff follow half term Maths topic planners focussing on a theme e.g. length, time, money, capacity to ensure a breadth of mathematical knowledge, opportunities to extend and build on prior knowledge and the generalisation of skills across the key stages. The themes are chosen specifically for each pathway, depending on the needs of each cohort and run on a 2 year cycle.

Half-term plans are bespoke and relevant to the needs and levels of each class and take account of developments in provision for pupils progressing through Birth to 5 Matters and the Riverside Learning steps. They give details of the main teaching objectives each week which are broken down further on weekly plans to ensure progression and to make certain we are developing the pupil's prior Mathematical knowledge and skills.

Planning for the Curiosity and Discovery cohorts have been tailored further to ensure that pupils of all abilities are able to access our curriculum at their level, utilising terms such as explore, experience and engage. Planning is also blocked e.g. area of study is taught in one week over a half term to ensure that skills are embedded through opportunities to revisit or 'overlearn' key concepts.

Within the Early Years, Mathematics is delivered in line with the EYFS framework. Mathematics provides pupils with opportunities to develop and improve their skills in counting, number recognition and the pattern of number. This also includes learning opportunities for colour, shape and measure through carefully planned enhanced activities.

Following on from half term planning, class teachers complete weekly plans. These give progressive and specific learning objectives for each mathematics lesson and details of how the lesson will be taught including resources used, use of language and how differentiation will take place within the lesson in order to support pupils' targets. We endeavour at all times to set mathematical work that is challenging, motivating and which encourages the pupils to communicate where possible about what they are learning.

Each teacher is responsible for the delivery of mathematics in their class and is supported by teaching assistants. The school uses a variety of teaching and learning styles in mathematics lessons which offer the opportunity for:

- Whole class teaching
- Group work
- Paired work
- 1:1 teaching
- Experiential and sensory work

- Outdoor learning
- My own work
- Play based learning

Pupils engage in:

- Exploratory sessions
- Practical work
- Consolidation of basic skills
- Exploring/reading mathematical rich texts
- Development of mental strategies
- Investigational work
- Problem solving
- Mathematical discussion
- Written methods
- Independent learning

We do this by:

- providing daily experiences in a rich and interesting environment that promotes mathematics in their everyday lives.
- providing daily lessons that have a defined structure that is communicated clearly to pupils. This includes the main teaching points, some independent activities, an element of outdoor learning, play, and a time of focused teaching for individuals or small groups of pupils.
- providing Curiosity and Discovery pupils with the relevant skills they need, through an array of hands on experiences using sensory, practical and concrete resources to enthuse and motivate our pupils with severe needs.
- providing a range of practical and motivating resources that will allow pupils to develop their skills in number, shape, space and measure and using and applying.
- providing opportunities for pupils to explore and read a range of mathematical rich texts (fiction and non-fiction) in order to allow pupils to experience maths themes in different contexts.
- providing opportunities for pupils to apply and develop their mathematical skills across the whole curriculum through the provision of quality, concrete and active experiences, e.g. play based learning, educational visits, outdoor learning etc.
- providing pupils with a range of different teaching strategies that are engaging and focus on particular skills e.g. new concepts.
- providing pupils with meaningful and current mathematical language through use of "STAR" concept teaching, Blank language and focussed "Words of the Week".
- providing opportunities to develop their independence and practise their learnt skills through My Own Work bags, Discovery Time, and play.

- providing pupils with opportunities to revisit/'overlearn', to practice and consolidate different areas of mathematics and to embed key concepts in to their long-term memory.
- providing opportunities for parents to learn how to make use of practical resources and encourage pupils' learning at home.

To support the teaching of mathematics we use the following strategies:

**STAR concept** - As a school we are enhancing the way we teach vocabulary by using some of the strategies and ideas from the 'Word Aware' program. From this we promote a method called STAR, which stands for Select, Teach, Activate and Review. To allow pupils to imbed new language and concepts, we teach one concept at a time rather than teaching opposites together e.g. "empty" and "not empty," rather than "empty and "full." This is taught through fun songs, signs, symbols, body movements, use of puppets, motivating props which in turn supports the children to retain new skills (see STAR concept planning sheet).

**Attention Autism** - Attention Autism is aimed at pupils with Autism however it is also used to support pupils with their attention, communication and social interaction skills. In Maths it is used to develop attention when teaching mathematical concepts and themes in a fun and exciting way e.g. particular numbers, shapes or addition/subtraction.

**Practical resources** - we provide pupils with a range of practical resources (hands-on, physical (concrete) resources) that help learners who often have problems in understanding mathematical concepts. Pupils are encouraged to make rich connections with these maths resources to develop fluency, mathematical reasoning and competence in problem solving with increasing difficulty. Some examples of resources include Numicon, multilink, counting pieces, outside resources e.g. leaves, stones, numbers in local community.

**Outdoor learning** - during maths sessions, pupils have regular access to the outdoors environment where children are encouraged to use and transfer their mathematical skills and knowledge in different environments, as well as make good use of outdoor space and resources and promote pupil wellbeing (see Wellbeing policy).

**My Own Work** - pupils in KS1 and KS2 have My Own Work bags, which consist of achievable tasks to support independence and build on prior knowledge and skills. Children following Curiosity and Discovery pathways, generally have a motivating task and an adult led task, children following the Builder pathways aim to have more activities linked with their maths learning.

**Blank language** - The Blank Language scheme is a tool that is used to ensure adult questions are at an appropriate level. Examples of blank level questions for maths are: Blank level 1 - *Point to a triangle*; Blank level 2 - *Find a shape with 3 sides*; Blank level 3 - *Put the square next to the circle*; Blank level 4 - *How do you know it's a cube?*

**Discovery play** - for EYFS, Curiosity and KS1/KS2 Discovery pathways, discovery sessions develop resilience through active learning and pupils will make links, explore their ideas and strategies for problem solving.

**Play Builders** - for KS1/KS2 Builder pathways, play sessions support a number of skills in addition to those concerned with motor skills, including imagination, planning and trying out and testing ideas. These regular play sessions give pupils the opportunity to persevere when things do not go as expected by collaborating with their peers and adults to solve problems.

### **Impact**

Pupils are formally assessed against the Riverside Learning Steps, the Engagement model or the Early Years Foundation Stage profile (please see the EYFS policy) each term to track the pupil's progress in Mathematics which informs us which pupils are meeting/not on track to meet their end of year targets.

Every pupil has identified Maths targets to focus on within their EHCP reviews and from this, teachers set appropriate maths learning objectives on their Individual Education Plans (IEPs) to enhance their skills appropriately. Progress in IEP targets are tracked and evidence is collated at least once a week in their progress books to inform the next steps.

Assessment also occurs during lessons through questioning, observation of pupils at work and marking of work. Daily assessment by the teacher in consultation with TA staff identifies any misconceptions the children may have or areas that the children are exceeding in and enable weekly plans to be adjusted if required, making sure that pupils are not moved on before they have consolidated their learning.

Pupils show enjoyment through their learning and are confident when using a range of resources to support their learning e.g. making effective use of numicon. Pupils are encouraged to 'have a go' and through play, they have opportunities to learn and develop crucial skills in problem-solving and working with others. Pupils are demonstrating their skills with more independence and have the ability to transfer their skills when out and about e.g. using money when buying something in a shop or recognising numbers out in the community i.e. numbers on buses, counting how many cars they can see, telling the time.

Where appropriate, pupils are able to communicate about their learning using some mathematical language in a positive way and celebrate their successes through sharing work in Be Proud assemblies, postcards home when targets are met or via the home link book which ensures pupils can share their achievements with their families.

Parents have also shown engagement in their child's learning through attending maths workshops at Riverside and maths learning sessions in class. This enjoyment for learning has allowed skills to be transferred in to the home environment e.g. laying the table, matching socks or counting toys.

All these outcomes demonstrate that our curriculum and bespoke teaching strategies are having a positive impact on our pupils. Our pupils are supported for their next stages of education and development and they feel a sense of belonging in order to succeed in life.

*Appendices:*

*STAR concept planning sheet*

*Written: December 2019*

*2<sup>nd</sup> draft: December 2021*

*3<sup>rd</sup> draft: July 2022*

*4<sup>th</sup> draft: February 2023*

*Reviewed: July 2024*

Presented to Governors T&L committee: