

## Maths Curriculum Statement 2021

### 1. Curriculum intent

Our Gearies curriculum is based upon the research that underpins effective learning. From Vygotsky's constructivism theory in the 1930s to the current variation theory by Gu (see appendix for full list). These theories are evidenced by research. This research correlates to successful mathematical teaching and learning in countries rooted at the top of the PISA table. The Maths curriculum at Gearies is based upon the concepts of problem solving, reasoning and fluency. The learning is accessible to all from SEND to higher attaining children, as we believe that everyone is capable of being a successful mathematician.

In the Early Years, Maths is one of seven learning areas. It takes place every day through continuous provision as well as directed teaching.

The national curriculum is the foundation of our planning KS1 and KS2.

The national curriculum aims to ensure that all pupils:

- become **fluent** in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.
- **reason mathematically** by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language
- can **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.

At Gearies we aim to ensure that all children experience the above concepts through various different approaches.

Our local community is ethnically diverse there for it is vitally important to teach Mathematical language which enhances understanding. We encourage the children to explain their thought processes through a variety of models and structures. All ideas are valued.

Our school values are promoted through the teaching and learning of Maths:

- Being courageous in sharing their thought processes and taking risks when confronted with new challenges.
- Having the independence to select strategies and resources to aid learning.
- To respect all conjectures/ideas that are shared during Maths lessons.

As part of a broad and balanced curriculum, Maths underpins learning in other curriculum subjects. They have the opportunity to apply Mathematical skills in areas such as Science i.e. measuring the distance a car travels. They confidently link knowledge, skills and understanding without fear or hesitation.

At Gearies, we believe, as per the National curriculum, that Maths 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.

## **2. How our vision is ambitious**

At Gearies, we are ambitious in our approach to the teaching Mathematics as we help pupils to gain enjoyment through a growing self-confidence in their ability. Teachers identify core concepts and procedures that pupils need in order to progress and show how they can build proficiency in the subject.

## **3. Curriculum enhancement**

To support the learning of Maths in school, success of achievement is celebrated regularly through assemblies. This helps children to remain focused and self-motivated in their learning. Alongside such events, teachers and practitioners organise regular and specific interventions to support a range of children. In addition to this, programmes such as Education City and Times Table Rock are frequently used to enthuse children and promote a positive attitude towards the subject. In upper key stage 2, classes are grouped based on individual learning needs. This allows teachers to focus on providing opportunities for children to enhance their understanding.

## **4. The curriculum implementation**

Maths is taught every day for at least one hour in both Key stage 1 and 2. In the Early Years, Maths is one of seven learning areas. It takes place every day through continuous provision as well as directed teaching, including a weekly teacher-led focus activity. In Year 5 and 6, children are grouped based on their individual learning needs. Our bespoke Gearies curriculum is tailored to be inclusive, allow SEND children to access the learning based on their Individual Education Plan (IEP) with additional adult support.

We encourage parents and carers to take an active role in their child's learning. We achieve this through weekly tasks that are uploaded on year group blogs, mirroring the learning taking place in class. In addition to this, videos on various mathematical concepts are made available as a supporting tool.

In recent years, during periods of National Lockdowns and class isolation, learning has taken place online through daily zoom lessons. Each lesson involves teacher-led taught strategies with the opportunity for children to implement the knowledge followed by appropriate gap tasks.

## **5. Impact of the Curriculum on our Children**

The Maths curriculum at Gearies is promoted through real life experiences. Topics within the subject are contextualised to broaden the children's understanding of maths and its place in everyday life. Cross curricular links are an integral part of teaching at Gearies and embed the knowledge and skills taught in maths lessons.

## **6. Our strengths**

At Gearies, we pride ourselves on taking a holistic approach to teaching Maths, to ensure our children receive a broad and balanced curriculum. Teachers are encouraged to link their topics to real life concepts, ensuring that children are able to apply mathematics in their everyday life. Pupils are supported through appropriate scaffolds and are able to access challenge through differentiated activities. Through concrete, pictorial and abstract concepts, pupils are able to apply their learning to a range of problems.

## **7. Programme of study**

### EYFS

Number; Shape and space

### Year 1

Place number, Four Operations, Geometry, Length, Height, Weight, Volume, Fractions, Position and direction, Time, Money

### Year 2

Place number, Four Operations, Statistics, Geometry, Length, Height, Mass, Capacity, Temperature, Fractions, Position and direction, Time, Money, Problem solving and Investigation

### Year 3

Place number, Four Operations, Statistics, Geometry, Length, Perimeter, Mass, Capacity, Fractions, Time, Money

### Year 4

Place number, Four Operations, Statistics, Geometry, Area, Length and Perimeter, Fractions, Decimals, Time, Money

### Year 5

Place number, Four Operations, Statistics, Geometry, Perimeter and Area, Volume, Fractions, Decimal and Percentages, Money, Position and direction, Converting Units

### Year 6

Place number, Four Operations, Statistics, Geometry, Perimeter, Area and Volume, Fractions, Decimal, Percentages, Algebra, Money, Ratio, Position and direction, Converting Units, Problem Solving, Investigations

## **8. Assessment arrangements**

At Gearies we use two types of assessment. The first links with our simple view of learning. It is formative and happens daily as well as at the end of a unit.

The second is our Summative assessment based on our Thresholds. This is completed at the end of each concept. Gaps are identified and targeted through detailed planning.

## **9. Aspects we are currently developing**

At Gearies, we are currently developing the following areas:

- To develop a fully-cohesive approach to the teaching mastery mathematics.
- To ensure teachers consciously apply the 'simple view of learning' to minimise any gaps in learning.
- To help teachers to develop and maintain useful working walls in mathematics, updating them regularly throughout the year.

## **10. Impacts of recent professional development on standards**

As Maths leaders, we hold staff to account against Gearies high standards. We achieve this by supporting and developing staff through regular CPD sessions and having an 'open-door' policy. Lesson content and quality is regularly monitored against the school's outlined expectations. To maintain high standards of practise, we regularly research and update our methodology and share effective pedagogy.