



## **Mathematics Learning Environment Policy**

### **Grange View C. E. First School**

**April 2020**

**Our Christian Vision is that- Everyone sparkles.**

Grange view welcomes everyone to flourish and thrive. We are lifelong learners that strive to achieve our God given potential.

*So don't hide your light! Let it shine brightly before others.*

**Matthew 5:16** The Passion Translation of the bible

### **Our Ethos**

The children are living a Christian life where they aim to sparkle, thinking about our core Christian Values; Love, Friendship, Trust, Forgiveness, Respect and Wisdom.

### **Our Aims**

- To provide a stimulating and secure environment, inclusive of all faiths and cultures.
- To provide an engaging, meaningful and relevant curriculum that equips all learners with the necessary skills for their educational journey.
- To value all individuals and support them to reach full potential and create an atmosphere of equal opportunity where expectations are high.
- To grow caring citizens who value the world we live in and celebrate moments of awe and wonder.
- To offer opportunities for collective reflections and inspire spiritual development that shape daily lives.
- To help the children to form values which will allow them to make moral choices throughout their lives, not just during their school years.
- To work in partnership between home, school, church and the wider community.

## Introduction

Mathematics teaches children how to make sense of the world around them through developing their ability to calculate, reason and solve problems. It enables children to understand relationships and patterns in both number and space in their everyday lives. Through their growing knowledge and understanding, children learn to appreciate the contribution made by many cultures to the development and application of mathematics.

Our aims of teaching mathematics are:

- to promote enjoyment of learning through relevant practical activity, exploration and discussion;
- to promote confidence and competence with numbers and the number system;
- to develop the ability to solve problems through decision-making and reasoning in a range of contexts;
- to develop a practical understanding of the ways in which information is gathered and presented;
- to explore features of shape and space, and develop measuring skills in a range of contexts;
- To understand the importance of mathematics in everyday life;
- To develop skills leading to mastery of mathematics.

## National Curriculum

The objectives we teach are from the national curriculum 2014. The national curriculum for mathematics 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

The curriculum objectives are a framework to support teaching and learning however teachers are aware that there is a need to be flexible and creative depending on the different learning styles of our pupils.

As a result, we aim to ensure that our Maths learning environments are number rich and stimulate our children's interests in daily Mathematics. Teachers may use their own creativity and knowledge of their pupils to display and promote Maths however they wish to. All teachers have their own teaching style and individuality and this is not to be lost however there are some key elements of the working wall which all staff should follow and monitor.

### **Learning environment and resource non-negotiables**

The working wall should clearly state the unit of work being taught so children and other members of staff are aware.

Maths topic vocabulary must be displayed relevant and up to date so that children can refer to these words during reasoning activities or talk partner discussions.

Within Key Stage 1 and sometimes lower Key Stage 2, teachers should model concrete, pictorial and abstract strategies so children are able to see progression in their methods. This also allows children to successfully draw upon strategies which have supported their learning.

Teachers should try to share a 'mistake of the week' this maybe a whole class misconception or a think for pink mistake from a previous lesson.

In Key Stage 1 and 2 teachers attempt to display the many reasoning strategies they have tackled together. This could be a 'Prove it', true or false' or a 'draw it, make it and explain it' task.

All concrete and pictorial resources in each class should be clearly labelled and organised so that children know where they can get support from if needed. This maybe organised in drawers or in maths area or station where resources area readily out and available to the children.

In Early Years number flags are displayed throughout the year along with photos and examples of children's maths learning. This should be taken from a range of practical activities and some maybe cross curricular.

As in Key Stage 1 and 2, resources are clearly labelled and readily available for children to explore with. Early Years use a variety of rich Mathematical story books and nursery rhymes which are displayed within the maths and reading area for children to enjoy.

## **Resources**

**All classrooms should have access to the below resources:**

### ***Key Stage 1 and 2***

- Part part whole models
- Tens frames
- Bar models
- Cuisenaire rods
- Dienes or base ten apparatus
- Place value counters
- Double sided regular counters
- Multilink cubes
- 100 squares
- Number lines pictorial and abstract
- Number tracks
- Numicon number lines
- Numicon
- Numicon pegs and peg boards
- 3D and 2D shapes
- Money
- Bead strings
- Mathematical games - dominoes, snakes and ladders etc.
- Dice
- Straws
- Clocks

### **EYFS**

- Numicon set per class
- Numicon pegs and pegboards
- Small word counting equipment
- Numicon number line to 20
- Natural materials to support outdoor learning (stones, pebbles, chalk, twigs etc.)
- Number games
- Clocks
- Straws
- Dice
- Money

- 2d and 3d shapes
- Bead strings
- Number tracks
- Part part whole models
- Multilink cubes
- Regular double sided counters
- Tens frames

It is the responsibility of the subject leader to audit and monitor the maths learning environment on a regular basis. If staff would like to order different resources or feel they are lacking in some areas they should let the subject leader know so that resources can be fairly distributed or more resources can be ordered.

Examples of good practice across our school

